

**IMPROVING THE TEACHING OF ENTREPRENEURIAL SKILLS IN  
CONSTRUCTION TRADES STUDENTS IN TECHNICAL COLLEGES IN NIGER  
STATE**

**BY**

**SHAFII Musa Suleiman  
2014/1/52018TI**

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

**AUGUST, 2021**

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2017/3/67643TI**

**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF INDUSTRIAL  
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## DECLARATION

I **SHAFII MUSA SULEIMAN** with matric number **2014/1/52018TI** an undergraduate student of the Department of Industrial and Technology Education certify that the work embodied in this project is original and has not been submitted in part or full for any other diploma or degree of this or any other University.

SHAFII MUSA SULEIMAN  
2014/1/52018TI

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Sign and Date

## CERTIFICATION

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

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(External Examiner)

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Sign and Date

## **DEDICATION**

I dedicate this work to God Almighty for His grace, care and compassion, His profound love made it possible for me to make it thus far in my academics. To my loving parents Engr. Sulaiman Shafii Alhaji and Hajiya Aisha Gogonigi, to my ever supporting Siblings and Friends.

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### ***Abstract***

*The research was designed to improve the teaching of entrepreneurial skills competency in construction trades students in technical colleges in Niger State. Three research questions were answered and three hypotheses tested at 0.05 level of significance were formulated for the study. The research design used for this study is the survey research in which questionnaire was formulated to solicit the information from respondents. The targeted population for this study is 100 subjects comprising of 80 technical teachers and 20 school administrators from 7 technical colleges in Niger State. Data obtained was analysed using mean, standard deviation and t-test statistics. The study concluded and recommended that there are entrepreneurial skills construction trades students should possess when graduating from technical colleges which are technical skills, managerial skills, finance skills and marketing skill, as well as proper funding and strong policies from the government towards the effective and efficient running of technical colleges in Niger State.*

## TABLE OF CONTENTS

<b>Contents</b>	<b>Page</b>
Title page	i
Declaration	ii
Certification	iii
Dedication	iv
Acknowledgement	v
Abstracts	vi
Table of contents	vii
List of table	xi
 <b>CHAPTER ONE</b>	
<b>1.0 INTRODUCTION</b>	<b>1</b>
1.1 Background to the Study	1
1.2 Statement of the Problem	7
1.3 Purpose of the Study	8
1.4 Significance of the Study	8
1.5 Scope of the Study	9
1.6 Research Questions	10
1.7 Hypotheses	10
 <b>CHAPTER TWO</b>	
<b>2.0 LITERATURE REVIEW</b>	<b>11</b>
2.1 Theoretical Framework	11
2.2 Technical Education in Nigeria	13
2.3 Conceptual Framework on Entrepreneurial Skills	18



2.4	The Concept of Entrepreneurial Skills	22
2.5	Challenges of Teaching Entrepreneurial Skills in Technical Colleges	23
2.6	Review of Related Empirical Studies	25
2.7	Summary of Literature Review	28

### **CHAPTER THREE**

<b>3.0</b>	<b>METHODOLOGY</b>	29
3.1	Research Design	29
3.2	Areas of Study	29
3.3	Population of the Study	30
3.4	Sample and Sampling Technique	30
3.5	Instrument for Data Collection	30
3.6	Validation of the Instrument	31
3.7	Administration of the Instrument	31
3.8	Method of Data Analysis	31
3.9	Decision Rule	31

### **CHAPTER FOUR**

<b>4.0</b>	<b>PRESENTATION AND ANALYSIS OF DATA</b>	32
4.1	Research Questions	
4.1.1	Research Question 1	32
4.1.2	Research Question 2	33
4.1.3	Research Question 3	34
4.1.4	Research Question 4	46
4.2.1	Hypothesis 1:	35
4.2.2	Hypothesis 2:	36

4.2.3 Hypothesis 3	37
4.3 Findings of the Study	37
4.4 Discussion of the Findings	40
<b>CHAPTER FIVE</b>	
<b>5.0 SUMMARY, CONCLUSION AND RECOMMEDATIONS</b>	43
5.1 Summary of the Study	43
5.2 Implication of the study	44
5.3 Contribution to Knowledge	45
5.4 Conclusion	46
5.5 Recommendations	46
5.6 Suggestion for Further Research	47
<b>REFERENCE</b>	49
<b>APPENDIX</b>	52

## LIST OF TABLES

Content	Table	Page
4.1.1 Mean responses of the respondents of the technical teachers and school administrators on the entrepreneurial skills students of construction trades should possess when graduating from technical colleges in Niger State.		35
4.1.2 Mean responses of the respondents of the technical teachers and school administrators on the challenges of teaching entrepreneurship skills in technical colleges in Niger State.		36
4.1.3 Mean responses of the technical teachers and school administrators on the ways to improve the teaching of entrepreneurship skills in technical colleges in Niger State.		37
4.1.4: T-test analysis of the respondents regarding the entrepreneurship skills students of construction trades should possess when graduating from technical colleges in Niger State.		38
4.2.1 T-test analysis of the respondents regarding the challenges of teaching entrepreneurship skills in technical colleges in Niger State.		39
4.2.2: T-test analysis of the respondents regarding the ways to improve the teaching of entrepreneurship skills in technical colleges in Niger State.		39

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the Study**

Construction trade according to the National Construction Council (2005) is a trade involves transforming various resources into constructed and social infrastructure necessary for a socio-economic development. It embraces the process by which physical infrastructure are planned, designed, procured, constructed or produced, altered, repaired, maintained and demolished. The constructed infrastructure includes: building, transportation system and facilities which are airports, harbors, highways, subways for fluid containment, control and distribution such as water treatment and distribution, sewage collection and treatment distribution such as water treatment and distribution, sewage collection and treatment distribution system, sedimentation lagoons, dams, and irrigation and canal system, underground structure, such as tunnels and mines (Tanzania National Construction Council, 2005).

The industry comprises of organizations and persons whose companies, firms and individuals working as consultants, main contractors and sub-contractors, material and component producers, plant and equipment suppliers and merchants (Tanzania Ministry of Works, 2003).

The industry has a close relationship with clients and financiers. The government is involved in the industry as purchaser (client), financier, regulator and operator. Construction as an industry comprises of six to nine percent of the gross domestic product of development countries. Construction starts with planning, design and financing and continues until the project is built and ready for use. The strategic position of the construction industry in any nation's economy is never in doubt. As a result of the importance of the construction trade industry to a nation's economy, adequate manpower and skill development is necessary for the construction trade industry (Tanzania Ministry of Works, et al 2005). One of the important training institutions

focused on developing skills and manpower for the construction trade industry is Technical colleges.

Technical colleges are post basic education schools, where students learn skills in various occupations. Technical Colleges offer to the National Board for Technical Education (NBTE, 2014), the aim of technical college is to give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant. According to Bakare (2006), technical colleges are charged with the production of craftsmen and technicians. Akpan (2003) said that technical colleges and attitude required as craftsmen and technicians at sub-professional levels. Okoro (2006) pointed out that Technical Colleges are regarded as the principal Vocational Institutions in Nigeria that gives full vocational training intended to prepare students for entry into various occupations as artisans and craftsmen.

Technical colleges provide training for the study of technology and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. According to Federal Republic of Nigeria (FRN, 2004), trainees completing technical programs shall have three options.

- i. Secure employment either at the end of the whole course or after completing one or more modules of employable skills.
- ii. Set up their own businesses and become self-employed and be able to employ others.
- iii. Pursue further education in advance craft/technical programs and in post-secondary (Tertiary) technical institutions such as polytechnic or colleges of education (technical and universities).

The main aim of technical education is to enable learners to become employers of labor, meet needs of employers and improving the needed manpower for national development.

Technical Education is the process of preparing individual for useful work after graduation.

Technical Education actually plays a very important role in the socio economic growth and development of any country. According to the Federal Republic of Nigeria (FRN, 2004), Technical Education is concerned with qualitative technological human resources development, building technicians and technologies in technical and vocational field. Similarly, career and Technical Education (CTE, 2009) maintained that technical education facilitates the acquisition of practical and applied skills as well as basic scientific knowledge. Researchers from (Federal Ministry of Education, FME, 2003: United Nation Organization for Education, Science and culture UNESCO, 2005) have shown that countries that have technological breakthrough in the world today are those that have placed more emphasis and invested substantially on vocational and technological Education.

Technical and vocational education is that aspect of education that pertains to the acquisition of techniques and the application of knowledge of logical skill designed to meet the comprehensive requirements of modern industry. Technical education is that term of education is that term of education which equips individual with the acquisition of practical and applied skills, abilities and competency for individual to live in and contribute to the development for the society.

In their separate works, Ezeji, (2004), Nwachukwu, (2006), Ogwo and Oranu, (2006) and Okoro (2006) all established that vocational training requires same similar training and curriculum components as will be required in the real vocation. These components include; general education, theory and related courses, workshop practice, industrial training, production work and entrepreneurship training.

Entrepreneurship seems to have gathered widespread recognition as the engine driving the economy and society of most nations. According to Alberti et al., (2004) last decade has witnessed the powerful emergence of entrepreneurship research worldwide. Nowadays both scholars and policy makers are becoming aware of the importance of the educational system

for the development of entrepreneurship skills. However, the development of entrepreneurship skills in schools has different short term and long term results in the society.

Most entrepreneurship education programs present different objectives. These may be specific and immediately measurable objectives as well as more general and complex ones. Through the identification of various objectives of entrepreneurship education, we might have a deeper understanding of educational needs as well as more weighted choice of evaluative criteria and pedagogical techniques (Alberti et al., 2004).

Entrepreneurship continues to play a quintessential role in the economies of many developing countries of which Nigerians one (North, 2002). It is acknowledged that one of the drivers of the economy is the creation of small business ventures, which has greatly affected the economic growth, created jobs as well as increased the national competitiveness of the nation in the world business market (Nicolaidis, 2011). In Nigeria, entrepreneurship presents opportunities for bringing together the relatively younger population and redressing the past social and economic differences among its citizens. To ensure that a country's full potential for economic growth is attained along with better living standards for its citizens, North (2002) concurs that the entrepreneurial abilities of everyone, even the young, should be utilized. To this effect, the present government of Nigeria over the past years established systems whereby the young people can be dynamic and become involved in entrepreneurial ventures, in a bid to enable them cultivate an entrepreneurial spirit. Also, various informal and formal entrepreneurship education programmed have, as main objectives, to enable learners become innovative and constructive while acquiring entrepreneurial skills (North, 2002). Therefore, Elmuti et al (2012) observe that the objective of entrepreneurship education should be to train learners and upcoming entrepreneurs with the necessary skills required to start up a new business activity. With the advent of globalization, there are countless business opportunities for entrepreneurs. Emerging markets need to make good use of the great macroeconomic

policies, the availability and open access to markets to foster entrepreneurship among its people (Nicolaidis, 2011). This researcher concurs with Nicolaidis (2011) who reiterates that entrepreneurship is a great economic booster in the creation of new jobs as a result of the creation of new businesses, thereby reducing other social plights like poverty.

The Global Entrepreneurship Monitor (GEM) (2012) maintains that unless proper entrepreneurship education is put into practice in all schools, Nigeria's entrepreneurial activity will continue to lag behind that of other developing countries. Steenkamp, van der Merwe, and Athayde (2011) are of the opinion that enterprise creation requires investing time and capital in entrepreneurship education. While downplaying the relevance of education, Timmons and Spinelli (2007) argue that although education alone cannot completely make nascent entrepreneurs to become thriving entrepreneurs, it nonetheless increases their chances of accomplishment, survival and success. Taking the foregoing into consideration, Nicolaidis (2011) posits that by the year 2020, unemployment may be curbed if the unemployed masses of Nigeria are encouraged to develop entrepreneurial skills through education.

Entrepreneurship is "an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives'. It is seen as vital to promoting innovation, competitiveness and economic growth. Fostering entrepreneurial spirit supports the creation of new firms and business growth. However, entrepreneurship skills also provide benefits regardless of whether a person sees their future as starting a business. They can be used across people's personal and working lives as they encompass 'creativity, initiative, tenacity, teamwork, understanding of risk, and a sense of responsibility' (OECD (2014).

Therefore, the teaching of entrepreneurial skills in technical colleges ought to be more than the traditional established method of teaching where the teacher is at the center and acts as a source of embodiment of knowledge easily accessible in the current globalization. Here the teacher is



no longer the manipulator who knows it all but serves as a guide while the students take to themselves whatever they could be able to take from the global reach (Onwuka, 2009).

It is believed that the education of an entrepreneur will greatly influence his/her perception of entrepreneurship. Nicolaides (2011) affirms that to change learner's perception of entrepreneurship, an educational environment is needed where entrepreneurial ideas are generated, shaped and practiced.

Teaching learners to be creative, innovative and responsible citizens as well as to develop their entrepreneurial skills is the focal point of entrepreneurship education (North, 2002). It is contended that adequate teaching and training are needed for Nigerian entrepreneurs and that in order for the young people to contribute to the economy; they must acquire the relevant education and training in entrepreneurship. In anticipation, it will persuade them to become employers rather than employees once they graduate (Niewenhuizen and Groenewald, 2008). Therefore, the key to a successful entrepreneurship education is to find the most effective way to manage the teaching of skills and identify the best match between student needs and teaching techniques (Lee et al, 2007). The teaching methods adopted by the technical teachers is traditional methods most frequently demonstration, students centered or lecture method.

The situation is partly due to difficulties to run experiment and run some tests required for the teaching and learning because of the absence of materials and equipment for practical training. This made the teaching and research in entrepreneurial education very difficult which resulted in producing ill-prepared and insufficient graduates that are national development (Owolabi & Rafiu, 2010). The current teaching methods been practiced by the technical teachers in Nigeria where the teachers is at the center and acts as a source of embodiment of knowledge is inappropriate in the teaching of entrepreneurial education.

It is generally agreed that traditional methods are less effective in encouraging entrepreneurial attributes. It is said that such methods actually make students become dormant participants.

These methods prepare a student to work for an entrepreneur, but not to become one. The existing shortfall in teaching methods confirms Kirby's (2004) comments that most entrepreneurship educators though relate their courses with new ventures creation; they actually end up teaching about entrepreneurship.

Since entrepreneurship is the ability, it can be developed merely through learning-by-doing (Higgins and Elliot, 2010). The current trend in teaching entrepreneurial include: business/computer or game simulations, video and filming, role models or guest speakers, business plan creation, project works. Also used are games and competitions, setting of real small business ventures, workshops, presentations and study visits. This method is termed "active" and is said to be more appropriate for nurturing entrepreneurial attributes among participants (Mwasalwiba, 2010).

## **1.2 Statement of the problem**

The Nigeria economy today is plagued with numerous problems not limited to poverty and unemployment. People are unemployed for various reasons; one of them is lack of business skills and competences (Govender, 2011), while another is lack of motivation to go into business. Oxford (2011) stated that in Nigeria. Another problem of entrepreneurship education is the lack of funding for technical schools from the government, lack of basic knowledge on the teaching of entrepreneur education.

The entrepreneurial activity is lower among the youth aged between 18-24 years than in any other age group, which is the same trend in most developing countries. It is therefore imperative to have youth entrepreneurship training and education so as to curb unemployment and poverty among future adults.

However, the researcher is inclined to accept the submission of Hannon et al (2006) that there seems to be a misalignment between the entrepreneurship education received in schools and

the knowledge and skills needed to become a successful entrepreneur upon leaving school or in the future because the entrepreneurship education received in schools is not adequately addressing the knowledge and skills needed by school leavers to become successful entrepreneurs. In other words, entrepreneurship education that incorporates factors that drive creativity, innovation, self-confidence, leadership and apposite attitude towards entrepreneurship in the formative years of a learner's education are lacking. These factors are lacking in the entrepreneurial skills development of construction trade students in technical colleges. The study investigates on the ways to improve the teaching of entrepreneurial skills in technical colleges.

### **1.3 Purpose of the Study**

The purpose of this study was to investigate the ways to improve the teaching of entrepreneurship skills in Construction trade in technical colleges in Nigeria. Specifically, the study seeks to;

1. Determine the entrepreneurial skills required by construction trade students technical colleges in Niger State
2. Find out the factors affecting the teaching of entrepreneurial competency to construction trades students in technical colleges in Niger state.
3. Find out the measures needed for improving the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger state.

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

The findings of this study would benefit the following:

The curriculum planners, Ministry of education, Teachers, Students, Future researchers. The study is expected to benefit curriculum planners as it will draw their attention to the need to

actualize the implementation of entrepreneurship education to curb the high unemployment rate in Nigeria. This awareness will enhance the designing of pre-service and in-service programs that will include appropriate knowledge and skills needed for implementation of entrepreneurship education. In addition, the planners would find the results of the study relevant in the selection of curriculum contents and materials that will enhance the implementation (teaching and learning) of entrepreneurship education curriculum.

The findings of the study would be of immense benefit to the ministry of education and supervisors as they appreciate the importance of promoting entrepreneurship education in schools with the necessary competency needed for implementation.

Teachers would also benefit from the results of this study as they will become aware of the competencies needed for their effective participation in the implementation of entrepreneurship education curriculum. It would also enable the teachers to apply the identified competencies in the improvement of individual classroom instruction to ensure the permanent change in the behavior of learners. Improved competency needs would enhance teacher's effectiveness in the teaching of entrepreneurship education that will provide a forum for the students to become self-reliant through the acquired skills. It is hoped that the students would see the challenges posed to learning entrepreneurial skills as well as the need to equip and avail themselves with the knowledge of entrepreneurial education so to key its various advantages.

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

The research is focused on investigating the ways to improve the teaching of entrepreneurial skills required by construction trades students in technical colleges in Niger state. It is also focused on the entrepreneurial skills required by construction trades students in technical colleges in Niger state

It is delimited to the factors affecting the teaching of entrepreneurial skills competency to construction trade students in technical colleges in Niger state

It is also focused on the measures needed for improving the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger state.

## **1.6 Research Question**

The following research questions were formulated for the study:

1. What are the entrepreneurial skills required by construction trades students in technical college in Niger State?
2. What are the factors affecting the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State?
3. What are the measures needed for improving the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State?

## **1.7 Hypothesis**

The following null hypotheses were formulated and will be tested at 0.05 level of significance:

**HO<sub>1</sub>:** There is no significant difference on the main response between the construction trade teachers and construction trade students on the entrepreneurial skills required by construction trades students in technical colleges in Niger State.

**HO<sub>2</sub>:** There is no significant difference on the main response between construction teachers and construction trade students on the factors affecting the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State.

**HO<sub>3</sub>:** There is no significant difference on the main response between construction teachers and construction trade students on the measures needed for improving the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger state.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Theoretical Framework**

The theoretical framework used in this study was the activity theory, combined with a lifelong entrepreneurship model for evaluation, in order to provide focus for the design, implementation and analysis of data for the evaluation of teaching entrepreneurship skills. Activity theory is all about the activity which is the object, the group of people involved in this activity (subject), those involved in this activity (community), which resources are used in this activity, which is the tool, who does what in this activity, which is the division of labor as well as the rules of engagement of this activity (Engestrom, 2011).

This study focuses on the third generation activity theory where all members of the community (teachers, learners), the subject, and the object play an important role in the transfer of entrepreneurial knowledge and skills to the learners.

Vygotsky introduced the first generation activity theory which based on the fact that human behavior lacks motivation. The first generation activity theory argues that human behavior is prompted by objects and not motivation. Engestrom (1987; 1999) emphasizes that the object in an activity which must be mediated by tools. The second generation activity focuses on the action which an individual and the activity which is collected to attain a certain outcome, goal or purpose (Davies, 2011). In the second generation activity theory there must be an object and a motive for an activity to occur. The issue representations, voice, emotion and identity are the focal point of the third generation activity theory whereby the relationship among activity systems is being examined (Bakhurst, 2009).

The activities must each have a purpose or a goal, which is to mean that the activity are oriented by motives. In the activity theory an object is classified as an ideal, material or object used to satisfy a need. The objects in this study are the teachers and the teaching of entrepreneurship

education. Actions are geared towards a specific and are regarded as the goals of that activity. For example, the goal of teaching entrepreneurship education is to transfer entrepreneurial skills and knowledge to learners. Another component was added to the activity theory by Engestrom (2001), which is the community. The community are those who have a common object, for example, the lecturers and head of department as well as the deans of faculties share the same outcome to transfer entrepreneurial knowledge and skills to learners and then add to mediate between subject and community, and the division of labor to mediate between object and community.

Activity theory was chosen as a framework so that entrepreneurship education could be evaluated as an entire system rather than focusing on isolated fragment of entrepreneurship education. Therefore, the evaluation of entrepreneurship education in this study can be seen as an activity system. The subject is the subject teacher (the course facilitator) while the tools that are used to act on the object (enhancing knowledge and skills) to achieve the outcome of gaining entrepreneurial knowledge and skills are the teaching and learning methods and materials. The community comprises everyone who shares a common object (in this case, education learners) and includes other course facilitators, or coordinators, learners the head of department, business people mentors and even parent. The rules, which promote or constrain behaviors, refer to policies for education and training and selection of criteria for learners. The division of labor pertains to what each community member is responsible for doing when acting on the object and describes both a horizontal division as well as a vertical division in terms of their relative positions of power.

These three classes in the activity theory are viewed as a whole. Tools being one of the classes in the activity theory are the rules and policies that are used. There are also the rules which can be explicit and implicit norms, social norms or conventions. The third class is division of labor which refers to the explicit and implicit organization of the community in transforming the

objects into outcome. For examples, the teachers, learners, and parents must all ensure that they all have a part to play in the transfer of entrepreneurial knowledge and skills to learners. Activities may intersect one another in that different subjects, in this case educators, engage together in a set of harmonized actions that may have multiple objects (kuutti, 1991).

Activity theory also highlights that an activity can be conducted within a social context or within a specific community (Hassan, 2012).

## **2.2 Technical Education in Nigeria**

Historically technical education in Nigeria has been considered as an educational program meant for low level, low brilliant and less privileged and second class (Okoro 1993. Eze and Okorafor 2012). Technical Education “is that aspect of education which leads to the acquisition of skills as well as basic scientific knowledge”. It is a planned program of courses and learning experiences that begins with exploration of career options, support basic academic standards, leadership preparation for industry defined work and advanced and continuing education. (United Nation Educational Vocational Organization (UNEVOC), 1996 and MacLean & Wilson, Springer 2009). Vocational education is a practical instruction that gives learners specific occupational skills. It is a training used for a specific vocation in industry or agriculture or trade (Webster, 1993). Vocational education and training according to writers prepares people for employment in the trades, industry health, agricultural, business organization and offices. Etc. what is called “Technology Education” was formally restricted to technical education which according to Aina (1994) meant skill in training in crafts and in certain trades such as building, auto mechanics, woodwork, electrical/electronic, and metalwork; Aina further postulated that the major fabric of technology education involves training in the process of applying both science and technical education to practical problems right from primary to tertiary level of education.

Adeshina (2002) also commented that, education at all levels is a delicate issue, which must



serve as a way forward to every society especially in a developing nation like Nigeria. According to Adeshina, advanced countries have improved their standard of living by education, which is considered to stimulate economic and technological development; thus education can be regarded as an investment that yields dividends in terms of overall development of a country.

Uyanya (2006) consecrated that, the most important thing that ever happened to Nigeria is the 1981 National policy on education which emphasizes the acquisition of technical vocational skill for self-reliance. Sower (2007) observed that vocational/technical education is a means towards industrialization of Nigeria. Olaitan (2006) defined vocational education as that aspect of education which is a skill acquisition oriented form of training, based on application of mathematics and scientific knowledge in specific field for self-actualization and development.

Sower (2007) goes on to state that vocational technical education is a social process, concerned primarily with people and their part in doing work that society needs alone which is concerned with preparing the people for work and improving the work potential of the labor force. Sower finally concluded that, the world drifts towards science and technology to fit into the society in the nearest future, requiring an indispensable knowledge of vocational education. Digbori (2004) revealed that, the venue for acquiring practical skills by technical college students is the workshop. Technical college provide technical training in a number of courses.

Olaitan (2006) further noted that in addition to the establishment of these various vocational and technical institutions, many of the old existing technical and institutions were renovated and equipment refurbished. Despite the concerted effort by the government, Ozoro (2007) observed vocational and technical education in Nigeria has remained inadequate, unplanned, uncoordinated and to a considerable extent irrelevant to the societal needs. In support of Ozoro's claim Atsunmbe discovered that employers of labor or industrialist generally consider

the products of technical education usable without further training. According to Olaitan (1990), organized vocational education with the development that skills, knowledge, and attitudes is required for success in any useful occupation. Vocational education is any form of education whose primary purpose is to prepare persons for employment in recognized occupation. Okoro (1993) said vocational education provides the skills, knowledge, and attitude necessary for effective employment in specific occupations. While on the other hand technical education is a comparatively new phase of vocational education, it is designed to meet the complex technological needs of modern industry. This type of education is considered to be of a post high school level and is intended to produce a classification of workers referred to as technicians or technologists.

VTE is of the mission to solve the problem of unemployment in each nation. To achieve this, the second international conference on VTE held in Korea 1999 set the motion for all nations under UNESCO to use VTE to address the employment and or other socio economic challenges of the 21<sup>st</sup> century. These challenges include globalization, trade liberalization, an ever changing technological scenario, ICT revolution and the subsequent rapid pace of social change. UNESCO (2000) concluded that VTE shall therefore produce, through the institution of entrepreneurial education, more job creators than job seekers.

The mission of VTE are as follows:

1. To eliminate unemployment by equipping the generality of out of school youths and adults with saleable skills.
2. To infuse into all adequate vocational efficiency for effective living.
3. To enhance and sustain national economic and technological development.
4. To engender national economic prosperity.

It is in the light of the above definition that the federal government of Nigeria in the national policy on education (1998) expected that vocational and technical education institutions should

provide trained manpower in applied science, technology and commerce and provide technical knowledge and vocational skills necessary for agriculture, industrial and economic development. The policy further expected that these schools and colleges will provide trainings leading to the production of skilled manpower. According to Mbata (1990), since the formation of the national policy on education, effective training and development of the right caliber of manpower in technical education has been problem free.

Technical colleges are institutions concerned with the teaching of subjects that lead to acquisition of practical as well as basic scientific knowledge, the colleges are establish for the purpose of satisfying community, state and country needs in terms of training and educating the younger ones in various trades and make them self-reliant.

Technical colleges which are identified as the principal vocational institution in Nigeria according to the National policy on education (FGN, 2004) provides technical and vocational training for quite a number of occupations including Auto mechanics, Building, Woodwork, Painting and Decoration, Metal work, Carpentry and Joinery, Radio and Television Work, Plumbing and Furniture making, Weaving and Dyeing, Refrigeration and Air condition Repairs, Printing, Agriculture, Mechanics work, Computer Technology, Electrical Installation Work, Metalwork and Fabrication Etc. (Olaitan 1990).

The duration of technical college training program is for three years leading to the award of National Technical Certificate (NTC) or National Business Certificate (NBC) by the National Business and Technical Examination Board (NABTEB) according to Olatunji (1992).To further enhance your knowledge and skills in occupation, a one year advance course is available in some Technical Colleges leading to the award of Advance National Technical Certificate (ANTC) or Advance National Business Certificate (ANBC) in various field of study.

The requisite qualification to enter Technical Colleges is a Junior Secondary School Certificate

(J.S.S.C) or Vocational Training Center Certificate (V.T.C.C) in the relevant field of study. National board for technical education (NBTE, 1987) stipulates that candidates going into NTC program must not be less than 14 years of age. While the entry qualification for ANTC is NTC or its equivalent and at least two year's post qualification cognate industrial experience. The origin of vocational and technical education could be traced to the pre-colonial era when traditional education was in practice. During this period, the child was trained in the family trade by direct apprenticeship of either the parents or relations. According to Ogunmila (2006), in traditional education of the various nationalities, arts and crafts of various types have existed as their expression of vocational training; while traditional agricultural practices have been developed to suit the cultivation of agricultural species predominantly produce in the different eco geography areas of the country.

In the early part of the colonial period, vocational training was not encouraged. Schools were built primarily for the purpose of evangelism by the missionaries. The early missionary was characterized by literacy type of education which was geared towards winning converts and producing clerks and interpreters (Ajayi and Ayodele 2002). It was not until 1908 that government department started to organize some form of vocational training school in 1908, the marine training school in 1928 and the public works, the post and telegraphy and railway training school in 1931 (Adegbile, 2000). Government's active participation in the provision technical education became obvious between 1930 and 1960. Yaba Higher College was officially opened on January 19, 1934. Technical Colleges was established by various regional governments in Enugu (1950) Ilorin (1935), Kano (1953), Bukuru (1953), Sapele (1955), Ijebu-ode (1959), Oyo (1961), Owo (1963), Aba (1964), and Abakaliki (1966). These colleges were not fee paying and they were adequately funded by the government.

Dike (2005) recommended that, Nigeria should begin now to take very serious investment in technical education and skill training as no nation can compete effectively in the emerging

global market place with poorly educated and unskilled workers. Nigeria can become an economic power house (and realize its vision) only if proper attention is given to technical and vocational education, promote and reward creativity and channel its material and human resources to productive use.

### **2.3 Conceptual Framework on Entrepreneurial Skills**

Concept formation and theory building are irreversible analytical tools. Therefore a proper grasp of this study requires the clarification of certain key concepts in the study. These concepts are entrepreneur, entrepreneurship, skill and entrepreneurial skills.

The word “Entrepreneur” was derived from a 17<sup>th</sup> century French word “Enstrepandre” meaning “Undertaking”. Initially, the word entrepreneur was used to describe people who undertook military expeditions. In 1755, an Irish man living in France, Richard Cantillon, used the word “Entrepreneur” to describe people that undertook the risk of setting up business enterprises (Gana, 2001). Overtime, this notion has dominated the conceptualization of entrepreneurship by different scholars. In other words, an entrepreneur is one who organizes, manages, and assumes the risk of a business or enterprise.

The view of entrepreneurs as organizers of businesses with opportunistic and risk bearing roles can be contrasted with entrepreneurs as innovators (Baumol, 1993). An entrepreneur is that individual that applies the principles of entrepreneurship in a bid to achieve a desired goal which could be to serve the public, to gain a name, or both. The critical factor is ‘risk-taking’, which is a major characteristic of an entrepreneur. Emphasizing this ‘risk-bearing’ factor in entrepreneurship, McQuaid(nd) wrote that “one of the earliest uses of the term ‘entrepreneur’ was by the French writer Richard Cantillon, in 1755, who argued that they were those who starts his own, new and small business (Drucker 1985).

An entrepreneur can be defined as the one who organizes, manages and assumes the need of a business enterprise. It can be defined as a person who have decided to take control of his/her

future and becomes self-employed whether by creating his own unique business or working as a member of a team at a multi-level vocation. He is a person who has possession of an enterprise or venture and assumes significant accountability for the inherent risks and the outcome. He is an ambitious leader who combines land, labor and capital to create and market new goods or services (Stephen et al., 1991).

Ezedum (2011) opine that an entrepreneur is the person who organizes the factors of production-land, labor, capital into various proportions in order to produce goods and services. By implication, the entrepreneur is a person who organizes, operates and assumes the risk for business ventures. An entrepreneur is a person who sells consumer goods and services in a unique way that makes him/her successful. Hill (2006) asserts that the unique behaviors of entrepreneur includes taking initiative, turning resources and situations to practical account of fund, accept risk of failure, bringing resources, labor materials and other assets put together and make their value greater than it was before. Entrepreneurs include changes, innovations and set new things from old things.

Precisely, entrepreneur is the actor in the private enterprise sector and can be depicted as a role model in the community, a provider of employment opportunities for others, a stabilizing factor in society, and a primary contributor to the development of natural and human resources within a nation. Entrepreneurs provide new insights and perform a positive function in the economic development of a country. Nelson (2011) observed that in the private sector, entrepreneurs are those who are motivated to take risks, to be innovative, develop new business ideas, and invest money and other resources to establish enterprises that have growth potential. According to Harvard Business school (1983) entrepreneurship is the attempt to create value by an individual or individuals through (a) the recognition of significant (generally innovative) business opportunity, (b) the drive to manage risk-taking appropriate to that project and (c) the exercise of communication and management skills necessary to mobilize rapidly the human,

material and financial resources that will bring the project to fruition (Kao and Stevenson, 1984).

We can say that entrepreneurship is the articulate and innovative use of opportunities for problem solving and/or wealth creation either in an organization or the larger society.

Entrepreneurship is ‘the ability to see what others who came before missed, to make connections between things that others had not, to get all three other factors to work together to create that which had not existed before. It is this insight, this creativity that makes the other three factors productive’ (Glaser, 2001). Brooks (2012) posits that entrepreneurship is starting a business from scratch, which includes everything from idea conception to managing the company for the long term. Hisrich and Peters (2002) posits that ‘entrepreneurship is the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence’. Entrepreneurial skills have been identified by Torren (2010) as very crucial for people that want to thrive in the business world to become successful. Five points identified were a) decision making, b) people skill c) planning, d) sales, and e) communication. In the worlds of Torren (2010): “In today’s world, if you want to be a successfully entrepreneur, there is certainly an “evolutionary” process that we must all undertake. In other words, there are skills that we must each learn and hone in order to thrive in today’s business world, and we need to be able to adapt those skills to our surroundings, or be left behind with the “entrepreneurial Neanderthal”.

Entrepreneurship is a program that inculcates creative, innovative, productive and managerial skills needed in business enterprises for self-reliance and national development (Eke, Igwesi and Oriji, 2011). Skill as basic ability is the means by which a person adjusts to life. A person’s aptitude and work functions are required and necessary as antidotes suggesting the suitable skills performance and acquisition of same by going through a given work sample. In the work

place, skill is what the workers give in exchange for remuneration. If the skill (or the cluster of skill popularly referred to as aptitudes) given is satisfactory, the worker gets satisfaction and the employer gets satisfaction in correspondence (Baiyelo and Adeyemo, 2001). This process, if sustained, culminates in promotion, retaining and prolonged tenure that leads to productivity (Darwist and Lofquist, 1967).

On retirement from active working life, a person's repertoire of skills will no longer be relevant to help him or her adjust to life. He or she needs new skills in how to enjoy leisure and adjust to the new way of life. This situation is the same for a handicapped person, a widow or indeed any person whose way of life has changed rapidly. Hence a person's rehabilitation in these contexts requires new skills with special consideration to his or her aptitudes and work functions. In the case of youth, whole adjustment in the world of work will rest solely on skills developed and used first at school and later at work; the economic, moral and political future of the nation will in time to come depend on it and these will from time to time determine its survival (Darwist and Lofquist, 1967).

In a classroom situation, skill is the ability to perform some tasks creditably. Up to a point, the more practice in the doing of specific task, the faster and better they can be done. It is associated with know-how while speed and accuracy are some of its traits and characteristics. Children who love to paint with crayon and water color often develop unusual perspective and excellent representation of nature. Ability to identify and measure these aptitudes in children for placement, promotion and remediation is a highly treasured experience which every good teacher must possess.

Until the 1940s, the study of skills was largely confined to industry. People were regarded as skilled when they were able to carry out a trade or activity that involved knowledge, judgment, accuracy and manual dexterity while qualification are usually acquired as the result of long training (Welford, 1967). In contrast, an unskilled worker was not expected to do anything



which could not be learned in a relatively short time. This industrial definition of skill expressed fundamentally in terms of the amount of training and experience required for effective performance has remained essentially the same to the present time. This performance is not exclusively concerned with annual operations =, it includes process control, and office as well as attempts to understand the human factors involved in managerial decision making (Welford, 1967).

Skill is thought of as a quality of performance which does not depend solely upon a person's fundamental, innate capacities but must be develop through training, practice and experience. Although, skill depends essentially on learning, it also includes the concept of efficiency and economy in performance. Modern concepts of skill street the flexibility with which a skilled operator reaches a given end on different occasions, varying specific actions according to precise circumstances.

However it must be reiterated that even though human capacities are not sufficient to produce skills, they form the necessary basis of their development. Skill represents particular ways of using capacities in relation to environmental demands, with human being and external situation together forming a functional system (Adeyemo, 2009).

#### **2.4 The Concept of Entrepreneurial Skill**

Skill is thought of as a quality of performance which does not depend solely upon a person's fundamental, innate capacities but must be developed through training, practice and experience. Although skill depends essentially on learning, it also includes the concepts of efficiency and economy in performance. Modern concepts of Skill Street the flexibility with a skilled operator reaches a given end on different occasions according to precise circumstances. Therefore, entrepreneurial skills are skills needed to have to succeed in business, most especially in teaching. Entrepreneurial skills are the basic skills necessary to enable one start, develop, finance and succeed in home enterprise. According to Hisrich & peters, (2002)

entrepreneurial skill can be defined as the ability to create something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence.

Entrepreneurial skill is the ability of an individual to exploit an idea and an enterprise (small or big) not only for personal gain but also development gain (Olagunju, 2004). Salgado-banda. (2005) describe entrepreneurial skills as the ability to have self belief, boldness, tenacity, passion, empathy, readiness to take expert advice, desire for immediate result, visionary and ability to recognize opportunity.

Kilby (1971) states that the array of possible entrepreneurial skills encompasses the perception of economics opportunity, technical and organization innovations, gaining commands over scarce resource, taking responsibilities for internal management and for external advancement of the firm in all aspects (of teaching enterprise).

## **2.5 Challenges of Teaching Entrepreneurship Skills in Technical Colleges**

Kuratko, (2003) posit that the emerging world economy of the 21<sup>st</sup> century is not only knowledge based and science and technology driven; it is highly competitive and globalized. The human brain is now the number one resource and is re-affirming the fact that learning is a life-long process. Thus, skills certification is more relevant and critical to our nation's sustainable development and global competitiveness. The quality of teaching and learning of entrepreneurial skills in technical colleges leaves much to be desired. Some of the challenges facing the teaching of entrepreneurial skills among others include the following:

1. **Poor Teaching Strategies:** The teaching of entrepreneurial skills in constructions trades has been too theoretical. There is no longer much emphasis on the learners' practical skill acquisition. Lecturers in most cases use lecture method only in a program that demands lecture method and demonstration. Odu (2006) maintained

that appropriate teaching strategies should be employed in teaching entrepreneurship education.

2. **Dearth in Qualified Teachers:** There is inadequacy of qualified teachers with adequate knowledge and skills in the teaching of entrepreneurial skills. Gang (2009) asserted that entrepreneurial education in the tertiary institution has not been properly implemented because of dearth in qualified teachers. The acquisition of entrepreneurial skills depends more on the teachers. Teachers in construction trades should be professionally qualified and occupationally competent so as to impart the required skills to the students. It is unfortunate that some building construction teachers are not knowledgeable and skilled, and the wrong methods of teaching adopted do not promote skill acquisition since no student can claim to possess more knowledge and skill more than the teacher in any subject.
3. **Inadequate Facilities:** facilities like classroom, workshops, laboratories, studios equipment and materials are grossly inadequate in the technical college. The difficulty in the procurement of facilities does not give room for the practical acquisition of entrepreneurial skills by learners. Similarly, the reason why the facilities are not there is partly due to high inflation rate in Nigeria (Imahiagbe, 1992). The impact of inadequate educational facilities is that training of the students become impeded and they end up not acquiring skills to go to the labor market.

Egboh (2009) stated that the following are the challenges confronting teaching entrepreneurial skills in construction trades:

- Limited industrial experience and opportunities for practical on course experience.
- Shortage of books and material including outdated literature

- Inadequate administration
- Inadequate evaluation of education outcome through continuous assessment.
- Inability of teachers to make the subject more attractive to students and more relevant to societal needs.
- Poorly planned expansion and enrolment.
- Inadequate policy and instability of education systems
- Absent of acceptable value and ethical systems
- Inadequate political commitment to quality education

## **2.6 Review of Related Empirical Studies**

Lecturer's factors include such characteristics as their qualification, experience, subject specialization and their location of teaching. Okeke (2003) carried out a study to examine the possible influence of teaching qualification on teaching effectiveness of curriculum student achievement in Enugu State. Two hundred (200) teachers with various qualifications were used for the study. The result shows that student taught by qualified lecturers performed significantly better than those taught by unqualified lecturers but no significant differences in academic performance of students taught by experienced lecturer and inexperienced lecturers. Similarly, mark (2005) conducted a study title, "trained and untrained teachers perception of important competencies for effective teaching of French: Implication for effective implementation of secondary French language curriculum". The study used 90 French language teachers in Enugu and Ebonyi state secondary schools. The instrument for data collection was a competency rating scale containing 50 competency items develop for the study. The result showed that significant differences exist in competency items develop for the study. The result showed that significant differences exist in competency items between the professionally trained (B.A/French teachers). The result also revealed that the professionally

trained teachers teaching French are better than the untrained teachers.

The study carried out by Abubakar (2009) on teachers and student factors as correlates to achievement in integrated science. He studied the extent to which eleven variables predict achievement in integrated science. Fifty two integrated science teachers and seven hundred JSS 3 students were selected from twenty-six schools within three local government areas in Kaduna state.

The researcher employed five instruments for data collection which include teacher's knowledge of objective question, teaching strategies and assessment practices, questionnaires, teaching experience on positive correlation between the eleven predictor variable. When taken together and the criterion variables (achievement in integrated science), eight out of the eleven variable contributed significantly to achievement in integrated science. The standard regression weights associate with each variable reveals the order of contribution; teaching strategies (0.265), assessment practices (0.184) teaching experience (0.100). The study showed no significant effect of teachers' gender on achievement in integrated science. The study recommended that significant effect of teachers' gender on achievement in integrated science. The study recommended that specialist are needed for meaningful outcomes in our educational systems.

Also, the study carried by Ugwu (2007) on the effects of teacher's qualification and student's age in the use of metal learning instructional strategies on students' achievement in metal work technology (MEINST). The researcher hypothesized that teaching qualification (academic and years of teaching experience) will have no significant effect on their use of the MEINST as shown by the students mean scores on metal work Achievement test (MAT). The study was conducted in seven states from the old eastern Nigeria, two hundred first-year technical education students in four colleges of education and four polytechnics were selected for the study. The study adopted a quasi-experimental design using four groups which had different

levels of professional qualification namely B.Sc. Tech education (B); HND with TTC (A and C), Med industrial tec. Edu (D). Two instruments were used: a 40-items criterion referenced metal work achievement test which was used for pre-test of the subject and the second, a 16 lesson plan based on the coursed content of sheet metal work, fabrication and welding. Each lesson plan contained MEINST at different stages of the instructional process and was used for teaching experimental group for 12 weeks. The control groups were taught with the conventional lecture method for the same period.

The analysis of pre-test and post-test scores showed that teachers' qualification (academic and years of teaching experience had a significant effect on their use of the MEINST). The mean score (29.19) of student in experimental group C whose teacher held M.Ed. industrial Tech. education was higher than the mean score (26.9) group A whose teachers held HND and TTC Ogwu recommended that personnel recruited for teaching subject should be those with teaching qualification.

Another study on teacher factors namely: as determinants of achievement in integrated science teachers' qualification, teaching experience, area of specialization, gender, knowledge of objectives, teaching strategies and assessment practices, They sampled forty teachers and five hundred students from twenty schools within sex education zones in Oyo state. The integrated science objective scale (ISOS) Teaching strategies and assessment practices questionnaire (TSAPQ) and integrated science achievement test (ISAT) was used for data collection (Emeka and odetoyinbo, 2003)

The result showed that knowledge of the objective of the program ranked higher (5.246%) at 0.05. Qualification of the teachers also contributed significantly (3.173%) in the criterion variable. From the seven predictor, sex had direct effect with only teacher's gender having indirect effects.

From the discussion above, it can be seen that more of the above studies dealt on

entrepreneurship education but outside the study. It is the intention of the present researcher to investigate on the teaching of entrepreneurship in technical college. It is also the intention of the researcher to investigate on genetic and personal traits expected of the teachers in teaching entrepreneurship education which is not found in the reviewed studies.

## **2.7 Summary of Literature Reviewed**

The literature has been reviewed along the various variables under study. The literature reviewed the concepts of entrepreneur education, entrepreneurship skills, assessment of teachers factors in the teaching and learning of entrepreneurship education.

The theoretical framework is based on activity theory. An entrepreneur refers to the person who puts in resource into various ways to make profit. He/she provide the manpower, finance resources and time in the running of the business similarly , the concept of education was defined as the process whereby individuals are provided with skills, values, knowledge and understanding to be useful members of a society, entrepreneurship education is geared towards the acquisition of skill needed to run business venture. This is necessary in the face of high level of unemployment in the country.

Evidence from the review of the need for entrepreneurship education in the school system; It enhances economic development, reduction in unemployment rate, reduction of rural-urban migration among others. All these importance were identified as the need for teaching entrepreneurship education in technical colleges. Evidence from the review also shows that lecturers are the key factors in the implementation of entrepreneurship education curriculum. However, there is no evidence to show whether, the present group of lecturers have been trained to teach entrepreneurship education. It became imperative to find out their level of experience, qualification and availability of instructional media, knowledge of the subject matter, utilization of the instruction media where he/she teaches. These issues form the subject of this study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

This chapter describes the procedure that was used in getting the necessary data, it is focused on the Research design, Area of study, Population, Sample instrument For data collection, Validation of the instrument, Administration of the instruments, Method of data analysis and Decision rule.

#### **3.1 Research Design**

The research design that was used in this study is survey research. The study utilizes a survey research design due to the nature of result and information required for this investigation. Questionnaires were used to solicit the opinions of the respondents as regards to the investigation on the ways to improve the teaching of entrepreneurial skills in construction trades in technical colleges. Nworgu (2006) stated that survey research is the one which a group of people or items is studied by collecting and analyzing data only from a few people, items considered to be a representative of the entire group. It involves the use of questionnaires. The Survey Design is considered suitable for this research as questionnaires are going to be used for data collection from the population

#### **3.2 Area of Study**

The study was carried out in all the technical colleges in Niger State. Niger state is located in the North Central region of Nigeria. They are: Government Technical College, Enagi - Bida; Government Technical College, Kontagora; Government Technical College, Minna; Government Technical College, New Bussa; Mamman Kontagora Technical College, Pandogari; Federal Science and Technical College, Shiroro; Suleiman Barau Technical



College, Suleja.

### 3.3 Population of Study

The targeted population for this study is 100 subjects comprising of 80 technical teachers, and 20 school administrators of technical colleges from 7 technical schools in Niger state.

S/N	Technical Colleges	Technical Teachers	School Administrators
1.	Government Technical College, Enagi-Bida	12	3
2.	Government Technical College, Kontagora	6	2
3.	Government Technical College, Minna	18	5
4.	Government Technical College, New-Bussa	10	2
5.	Mamman Kontagora Technical College, Pandagori	9	1
6.	Federal Science and Technical College, Shiroro	10	3
7.	Sulaiman Barau Technical College, Suleja	15	4
	<b>Total</b>	<b>80</b>	<b>20</b>

### 3.4 Sample and Sampling Technique

The entire population was used for the study therefore there was no sampling.

### 3.5 Instrument for Data Collection

The instrument used for data collection was a structured questionnaire on Investigation on the ways to improve the teaching of entrepreneurial skills in construction trades in technical colleges developed by the researcher for the study.

The questionnaire that was used to elicit information from the subjects. The questionnaire will be made up of two (2) parts, part one (1) consist of the introductory part while the part two (2) is sub-divided into three sections A. B. and C each corresponding to a research question. All items are to be responded to by indicating the appropriate respondent's best perception using four point scale.

Section "A" consist of 20 items, relating to the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria, Section "B" consist of 16 items, relating to the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria, Section "C" consist of 10 items relating to the ways to improve the teaching of entrepreneurship skills in Technical Colleges in Nigeria.

### **3.6 Validation of the Instruments**

The instrument for this study was subjected to face and content validity by the supervisor, two (2) lecturers from Industrial and Technology Education. The lecturers who validated the questionnaire will be required to check the suitability and clarity of items and add any other item(s) which is relevant but has not been included in the instrument and remove ambiguous or irrelevant statement in order to improve the content of the items.

### **3.7 Administration of the Instrument**

The questionnaire design was administered by the researcher to all the six technical colleges in Niger State. After the respondents respond the questionnaires will be collected back.

### 3.8 Method of Data Analysis

The mean and T-test was used for the study. The mean was used to answer the research questions, while T-test to test the hypothesis. Each item was accepted at a required competency, if the calculated mean of any item is equal or greater to 2.5 was considered as agreed and if the mean of any items fall at 2.49 and below was considered as disagreed. The null hypotheses will be tested using t-test statistics at 0.05 level of significance.

### 3.9 Decision Rule

To determine the acceptance level, a mean of 2.5 will be chosen as this is relatively interpreted to the 4- point scale used for this study. In view of the latter any item with a calculate mean of 2.50 and above will be tagged as agreed. Also any item with a mean of 2.49 and below will be disagreed. Also an inferential statistic t-test will be used to test the hypothesis at 0.05 level of significance to compare the mean response of the two groups.

#### Standard Deviation (SD) Formula

$$SD = \sqrt{\frac{\sum f(x-\bar{x})}{\sum f}}$$

$\bar{X}$  = Mean response of each group of respondents

$\sum$  = The sum of

X = The score on the rating scale

F = The frequency of each point on the rating scale

## CHAPTER FOUR

### 4.0 PRESENTATION AND ANALYSIS OF DATA

In this chapter the data collected from the instrument for the purpose of answering the research questions and testing the hypotheses. The findings of the study are presented in tables.

#### 4.1 Research Questions

##### Research Question 1

What are the entrepreneurial skills required by construction trades students in Technical Colleges in Niger State?

**Table 4.1: Mean responses of the technical teachers and school administrators on the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria**

S/N	Items	N <sub>1</sub> = 80 N <sub>2</sub> = 20		X <sub>T</sub>	Remark
		X <sub>1</sub>	X <sub>2</sub>		
1	Technical skills	3.33	3.34	3.33	Agree
2	Personal Branding skills	3.63	3.86	3.74	Agree
3	Team-work skills	3.60	3.57	3.57	Agree
4	Economic and adaptability skills	3.28	3.51	3.39	Agree
5	Work ethics and corporate performance	3.68	3.43	3.55	Agree
6	Communication skills	3.63	3.71	3.67	Agree
7	People Management skills	3.35	3.69	3.52	Agree
8	Design Thinking	3.25	3.46	3.35	Agree
9	Financial Management	3.43	3.13	3.28	Agree
10	Sales and Marketing	3.70	3.83	3.76	Agree
11	Organizational skill	3.55	3.14	3.35	Agree
12	Strategy Formulation	3.50	3.46	3.48	Agree
13	Relationship Building	3.45	3.11	3.28	Agree
14	Hiring and Talent Sourcing	3.65	3.77	3.71	Agree
15	Innovativeness	3.73	3.54	3.63	Agree
16	Human Resource Management	3.33	3.17	3.25	Agree
17	Risk Management	3.05	3.00	3.01	Agree
18	Business planning and development	2.88	2.83	2.85	Agree
19	Creativeness	3.83	3.89	3.86	Agree

N<sub>1</sub> = Number of technical College teachers

N<sub>2</sub> = Number of school administrators

X<sub>1</sub> = Mean of Technical College Teachers

X<sub>2</sub> = Mean of School Administrators

X<sub>T</sub> = Average Mean of X<sub>1</sub> and X<sub>2</sub>

The analysis in data Table 4.1 revealed that the respondents adjudged all nineteen (19) items as agreed with mean value ranging from 2.85 to 3.86 which is above the cut-off point as regards the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria.

### Research Question 2

What are the factors affecting the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State?

**Table 4.2: Mean responses of the technical teachers and school administrators on the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria.**  
Ni=80 N2=20

S/N	ITEMS	X <sub>1</sub>	X <sub>2</sub>	X <sub>T</sub>	Remark
1	Lack of funds	2.98	3.23	3.10	Agree
2	Inadequate supply of consumable	3.63	3.86	3.74	Agree
3	Inadequate internal and external quality control mechanisms.	3.60	3.57	3.57	Agree
4	Lack of interest on the part of the students	3.28	3.51	3.39	Agree
5	No provision of in-service training for teachers	3.68	3.43	3.55	Agree
6	Absence of curricular capacity to support the training	3.63	3.71	3.67	Agree
7	Lack of infrastructural support	3.13	3.29	3.21	Agree
8	Favourable policy environment and lack of government support	3.03	3.14	3.08	Agree
9	Overemphasis on theory delivery	2.95	3.31	3.13	Agree
10	Capacity of Teachers/instructors	3.18	3.03	3.10	Agree
11	Low Standards & Quality assurance in technical college	3.20	2.97	3.09	Agree
12	Absence of inadequate and functional Curriculum.	3.38	3.11	3.24	Agree
13	Inadequate internal and external quality control mechanisms.	3.23	3.03	3.13	Agree
14	Limited school inspections by the superintending agency	3.30	3.09	3.19	Agree
15	Teacher: Student ratio still very wide in many technical colleges while leaching facilities are extremely limited.	2.75	2.51	2.63	Agree
16	Very poor ICT deployments	3.23	3.17	3.20	Agree

N<sub>1</sub> = Number of technical College teachers

N<sub>2</sub> = Number of school administrators

X<sub>1</sub> = Mean of Technical College Teachers

X<sub>2</sub> = Mean of School Administrators

X<sub>T</sub> = Average Mean of X<sub>1</sub> and X<sub>2</sub>

The analysis in data Table 4.2 revealed that the respondents adjudged all sixteen (16) items as possessed with mean value ranging from 2.63 to 3.74 which is above the cut-off point as regards the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria.

### Research Question 3

What are the measures needed for improving the teaching of entrepreneurial skills competency to construction students in technical colleges in Niger State?

**Table 4.3: Mean responses of the technical teachers and school administrators on the ways to improve the teaching of entrepreneurship skills in Technical Colleges in Nigeria.**

S/N	ITEMS	Ni=80		N2=20		REMARK
		X <sub>1</sub>	X <sub>2</sub>	X <sub>T</sub>		
1	Teachers should diversify use of teaching methods specifically those that emphasize learning - by - doing approach	2.50	2.54	2.52		Agree
2	Technical Colleges should identify and partner with businesses to strengthen the practical	2.58	2.74	2.66		Agree
3	Establish quality assurance agencies by	2.65	2.51	2.58		Agree
4	Introduce Scholarship and Students' Loan Programmes for students who have shown excellence in	3.08	3.89	3.48		Agree
5	Use of electronic learning facilities for teaching students can help to improve the entrepreneurial	2.95	3.03	2.99		Agree
6	Enacting and faithful implementation of Policies that promote entrepreneurship	3.05	2.74	2.90		Agree
7	Integrate high-quality, nonfiction concepts into the curriculum.	2.80	3.11	2.96		Agree
8	Introduce project-based learning (PBL)	2.90	2.51	2.71		Agree
9	Institutionalize regular training and re-training of teachers along entrepreneurial lines	2.50	2.54	2.52		Agree
10	Provision of direct assistant to facilitate and enable teachers organize excursions to business ventures hereby reinforcing what they have been taught in	2.53	3.11	2.82		Agree

N<sub>1</sub> = Number of Technical Teachers

N<sub>2</sub> = Number of School administrators

X<sub>1</sub> = Mean of Technical Teachers

X<sub>2</sub> = Mean of School Administrators

X<sub>T</sub> = Average Mean of X<sub>i</sub> and X<sub>2</sub>

The analysis in data Table 4.3 revealed that the respondents adjudged all ten (10) items as possessed with mean value ranging from 2.52 to 3.48 which is above the cut-off point as regards the ways to improve the leaching of entrepreneurship skills in Technical Colleges in Nigeria.

#### 4.2 Hypotheses Hypotheses 1

**HO<sub>1</sub>** There is no significant difference on the main response between the construction trade teachers and construction trade students on the entrepreneurial skills required by construction trades students in technical colleges in Niger State.

**Table 4.4: T-test analysis of the respondents regarding the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria.**

**N<sub>1</sub> = 80 N<sub>2</sub> = 20**

S/N	ITEMS	X <sub>1</sub>	X <sub>2</sub>	S.D <sub>1</sub>	S.D <sub>2</sub>	T-CAL	REMARK
1	Technical skills	3.33	3.34	0.46	0.67	-0.13	N.S
2	Personal Branding skills	3.63	3.86	0.48	0.35	-2.40	N.S
3	Team-work skills	3.60	3.57	0.49	0.49	0.03	N.S
4	Economic and adaptability skills	3.28	3.51	0.74	0.50	-1.66	N.S
5	Work ethics and corporate	3.68	3.43	0.69	0.49	1.80	N.S
6	Communication skills	3.63	3.71	0.65	0.45	-0.67	N.S
7	People Management skills	3.35	3.69	0.48	0.46	-3.08	N.S
8	Design Thinking	3.25	3.46	0.43	0.50	-1.91	N.S
9	Financial Management	3.43	3.13	0.33	0.49	-3.07	N.S
10	Sales and Marketing	3.70	3.83	0.46	0.38	-1.33	N.S
11	Organizational skill	3.55	3.14	0.50	1.12	1.98	N.S
12	Strategy Formulation	3.50	3.46	0.50	0.60	0.33	N.S
13	Relationship Building	3.45	3.11	0.49	0.95	1.88	N.S
14	Hiring and Talent Sourcing	3.65	3.77	0.48	0.42	-1.17	N.S
15	Innovativeness	3.73	3.54	0.45	0.79	-1.66	N.S
16	Human Resource Management	3.33	3.17	0.79	0.88	0.79	N.S
17	Risk Management	3.05	3.00	0.74	0.83	0.27	N.S
18	Business planning and development	2.88	2.83	1.03	1.02	0.19	N.S
19	Creativeness	3.83	3.89	0.38	0.32	-0.75	N.S

$N_1$  = Number of Technical Teachers       $N_2$  = Number of School administrators,  
 $X_1$  = Mean of Technical Teachers       $X_2$  = Mean of School administrators  
 $SD_1$  = Standard Deviation of Technical Teachers

Table 4.4 revealed that there is no significant difference between the opinions of the respondents. The t-calculated is less than the t-critical value of +1.98 at 0.05 level of significance, which shows that the null hypotheses is accepted

### **Hypotheses 2**

**HO<sub>2</sub>** There is no significant difference on the main response between the construction trades teachers and construction trades students on the factors affecting the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State.

**Table 4.5: T-test analysis of the respondents regarding the ways to improve the Teaching of entrepreneurship skills in Technical Colleges in Nigeria**



S/N	ITEMS	X <sub>1</sub>	X <sub>2</sub>	S.D <sub>1</sub>	N <sub>1</sub> =80 N <sub>2</sub> =20		REMARK
					S.D <sub>2</sub>	T-CAL	
1	Teachers should diversify the use of teaching methods specifically those that emphasize learning - by - doing approach	2.50	2.54	1.16	0.69	-0.20	NS
2	Technical Colleges should identify and partner with businesses to strengthen the practical component of teaching.	2.58	2.74	0.86	0.90	-0.18	NS
3	Establish quality assurance agencies by	2.65	2.51	0.99	0.60	0.73	NS
4	Introduce Scholarship and Students' Loan Program for students who have shown excellence in demonstrating entrepreneurial skills.	3.08	3.89	1.13	0.75	-3.70	NS
5	Use of electronic learning facilities for teaching students can help to improve the entrepreneurial competencies of students	2.95	3.03	0.67	0.97	-0.40	NS
6	Enacting and faithful implementation of Policies that promote entrepreneurship	3.05	2.74	0.44	1.05	1.60	NS
7	Integrate high-quality, nonfiction concepts into the curriculum.	2.80	3.11	0.71	0.83	-1.75	NS
8	Introduce project-based learning (PBL)	2.90	2.51	1.04	1.18	1.49	NS
9	Institutionalize regular training and re-training of teachers along entrepreneurial lines	2.50	2.54	0.67	0.87	-0.24	NS
10	Provision of direct assistant to facilitate and enable teachers organize excursions to business ventures hereby reinforcing what they have been	2.53	3.11	0.92	0.88	-2.82	NS

N<sub>1</sub>= Number of Technical Teachers      N<sub>2</sub> = Number of School administrators,

X<sub>1</sub>= Mean of Technical Teachers      X<sub>2</sub> = Mean of School administrators

SD<sub>1</sub> = Standard deviation of Technical Teachers      SD<sub>2</sub> = Standard deviation of School administrators

Table 4.5 revealed that there is no significant difference between the opinions of the respondents. The t-calculated is less than the t-critical value of +1.98 at 0.05 level of significance, which shows that the null hypotheses is accepted.

### 4.3 Findings of the Study

The findings of this study have been organized and discussed according to the three research questions as well as the three hypothesis that have been formulated findings related to the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria

The study revealed the following on the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria;

1. Technical skills
2. Personal Branding skills
3. Team-work skills
4. Economic and adaptability skills
5. Work ethics and corporate performance
6. Communication skills
7. People Management skills
8. Design Thinking
9. Financial Management
10. Sales and Marketing
11. Organizational skill
12. Strategy Formulation
13. Relationship Building
14. Hiring and Talent Sourcing
15. Innovativeness
16. Human Resource Management
17. Risk Management
18. Business planning and development
19. Creativeness

**Findings related to the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria**

The study revealed the following on the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria:

1. Lack of funds
2. Inadequate supply of consumable
3. Inadequate internal and external quality control mechanisms.

4. Lack of interest on the part of the students
5. No provision of in-service training for teachers
6. Absence of curricular capacity to support the training
7. Lack of infrastructural support
8. Favorable policy environment and lack of government support
9. Overemphasis on theory delivery
10. Capacity of teachers/instructors
11. Low Standards & Quality assurance in technical college
12. Absence of inadequate and functional Curriculum.
13. Inadequate internal and external quality control mechanisms.
14. Limited school inspections by the superintending agency
15. Teacher: Student ratio still very wide in many technical colleges while teaching facilities are extremely limited.
16. Very poor ICT deployments

**Findings related to the ways to improve the teaching of entrepreneurship skills in Technical Colleges in Nigeria**

The study revealed the following on the ways to improve the teaching of entrepreneurship skills in Technical Colleges in Nigeria

1. Teachers should diversify use of teaching methods specifically those that emphasize learning - by - doing approach
2. Technical Colleges should identify and partner with businesses to strengthen the practical component of teaching.
3. Establish quality assurance agencies by Government
4. Introduce Scholarship and Students' loan Program for students who have shown excellence in demonstrating entrepreneurial skills.
5. Use of electronic learning facilities for teaching students can help to

improve the entrepreneurial competencies of students

6. Enacting and faithful implementation of Policies that promote entrepreneurship
7. Integrate high-quality, nonfiction concepts into the curriculum.
8. Introduce project-based learning (PBL)
9. Institutionalize regular training and re-training of teachers along entrepreneurial lines
10. Provision of direct assistant to facilitate and enable teachers organize excursions to business ventures hereby reinforcing what they have been taught in the classroom

#### **4.4 Discussion of Findings**

The discussion of findings is based on the research question formulated for this study the findings from research question one revealed the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria. Items like: Technical skills, Personal Branding skills, Teamwork skills, Economic and adaptability skills, Work ethics and corporate performance, Communication skills, People Management skills, Design Thinking, Financial Management, Sales and Marketing Organizational skill, Strategy Formulation, Relationship Building, Hiring and Talent Sourcing. Innovativeness, Human Resource Management. Risk Management. Business planning and development. Creativeness. The finding is in agreement with the opinion of Krueger (2000) and Federal Republic of Nigeria (FRN), (2004), when they stated dial creativity with regular innovation in understanding alt forces at work within the environment would bring in an improvement of entrepreneurship skills in students who are graduating from Technical college.

The results obtained based on research findings are in consonance with the opinion of question two pointed out the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria. These include; Lack of funds, Inadequate supply of consumable, Inadequate internal and external quality control mechanisms, Lack of interest on the pan of the students. No provision of in-service training for teachers, Absence of curricular capacity to support the training. Lack of infrastructural support, Favorable policy environment and lack of government support. Overemphasis on theory delivery, Capacity of teachers/instructors. Low Standards & Quality assurance in technical college, Absence of inadequate and functional Curriculum, Inadequate internal and external quality control mechanisms.

The findings are in consonance with the opinion of Egboh (2009) stated the following as the challenges confronting Teaching Entrepreneurial Skills in construction trades are but not limited to: Shortage of books and materials including outdated literature, Limited industrial experiences and opportunities for practical on course experience, Inadequate administration, Inadequate evaluation of education outcome through continuous assessment, Inability of teachers to make the subjects more attractive to students and more relevant to societal needs, Poorly planned expansion and enrolment, Inadequate policy and instability of education systems, Lack of interest on the part of die students, No provision of in-service training for teachers, Absence of curricular capacity to support the training, Lack of infrastructural support and favorable policy environment.

It was revealed in research question 3 that the ways to improve the teaching of entrepreneurship skills in Technical Colleges in Niger State include diversity in the use of teaching methods by teachers specifically those that emphasize learning - by - doing approach, Technical Colleges should identify and partner with businesses to

strengthen the practical component of teaching, Establishing of quality assurance agencies by Government, Introducing Scholarship and Students' Loan Programs for students who have shown excellence in demonstrating entrepreneurial skills.

This agrees with Aliyu et al (2014) and Okedi (2012), when they share the same views that strategies such as Training and re-training for all vocational and technical education teacher, improvement in work environment; motivation, Diversification of instructional approach in

Teaching entrepreneurship education especially the use of experiential learning methods interchangeably with the conventional style are some of the ways to improve the teaching of entrepreneurship skills in technical college in Nigeria. . The findings of the authors above help validate the result of the study.

## **CHAPTER FIVE**

### **5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary**

The research was titled: Investigation into the ways to improve the teaching of entrepreneurship skills in Construction trade in technical colleges in Nigeria.

Specifically, the study was designed to fulfill the following purposes:

1. Identify the entrepreneurial skills required by construction trades students in technical colleges in Niger State.
2. Determine the factors affecting the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State.
3. Identify the measures needed for improving the teaching of entrepreneurial skills competency to construction trades students in technical colleges in Niger State.

The study considers the ways to improve the teaching of entrepreneurial skills in technical colleges. This is prior to the fact that there seems to be a misalignment between the entrepreneurship education received in schools and the knowledge and skills needed to become a successful entrepreneur upon leaving school or in the future because the entrepreneurship education received in schools is not adequately addressing the knowledge and skills needed by school leavers to become successful entrepreneurs. Similarly, entrepreneurship education that incorporates factors that drive creativity, innovation, self-confidence, leadership and a positive attitude towards entrepreneurship in the formative years of a learner's education are lacking. These factors are lacking in the entrepreneurial skills development of construction trade students in technical colleges

In order to achieve these objectives, three research questions were formulated from the purpose of the study to serve as a guide. Moreover, two null hypotheses were formulated based on the research question which was tested at 0.05 level of significance.

Related literatures were also reviewed and guided the study: Theoretical Framework, Technical Education in Nigeria, Conceptual Framework on Entrepreneurial Skills, The Concept of Entrepreneurial Skill and Challenges of Teaching Entrepreneurial Skills in Technical colleges

Survey research was adopted for the study. The targeted population for the study was one hundred (100) respondents which consist of eighty (80) technical teachers drawn from the six (6) technical colleges in Niger State and twenty (20) School administrators drawn from the six (6) technical colleges in Niger State.

A questionnaire was structured into two parts namely part 1 and 2, while the first part consist of introductory while the second part consist of three sections A, B, C which corresponds to a research question served as instrument for data collection. This instrument was scored using a four (4) points rating scale. The data collected was analyzed using frequency table, mean, standard deviation and t-test. The items needed had mean score of 2.5 and above. In addition, the null hypothesis stated earlier was not rejected, as there was no significance difference in the responses of the respondents as regards the Investigation into the ways to improve the teaching of Entrepreneurial skills in technical colleges in Nigeria.

## **5.2 Implication of the Study**

The findings of this study have implications for students and graduates of



Construction trade from technical colleges, teachers, skill acquisition centers and the government. Students of construction trade from technical colleges will possess adequate skills upon graduation enabling them to set up Construction trade businesses and earn their living. Teachers of Construction trade will see the necessary step to learn more about skills required for self-employment in construction trade. These teachers will now educate their students on various skills required for self-employment in construction trade. Skills acquisition centers will inculcate the strategies identified to enhance their programs for training of unemployed graduates or youths in the society. The findings also have implication for government, The Government through her National Board for Technical Education or National commission for Colleges of Education will further create adequate policy to enhance the teaching of entrepreneurship skills required technical colleges in the country.

### **5.3 Contribution to Knowledge**

This research work results has so much value added to the technical skills and strategies used in carrying out operations in technical colleges in Minna and other related fields in technical skills industries in Minna, Niger State. By improving the techniques of construction trades in carrying out their activities effectively and efficiently. Also, staffs will also gain from this work by understanding the different procedure to which a construction in various trades is achieved towards the satisfaction of clients and this will also lead to improvement of long lasting learning relationship. Another contribution of this work is the changed in perception of people in related to gender biasness in the technical colleges in the community and country at large.

#### **5.4 Conclusion**

In view of the above findings, it was concluded that there are many entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges which cover technical skills, managerial skills, finance Skill, and Marketing skill. The study was carried out and found that die students must possess the aforementioned skills for self- employment.

The evolving and dynamic work environment of the declining economy has serious implications for skills training in technological education. To enter and make progress in the world of entrepreneurship and to keep abreast of changes, construction trade teachers need to adopt new ways to teach and impact students with entrepreneurship skill. People with adequate Entrepreneurship skills stand a better chance of being employed in the ever declining economy where adaptability is key.

Finally, the study has established ways by which the teaching of entrepreneurship skill identified can be facilitated and better taught to Construction trade students in technical colleges in Niger State.

#### **5.5 Recommendations**

Base on the findings drawn from the study, the following recommendations were made:

1. The teaching of entrepreneurship education should be practical oriented as this will help to improve students creativity and innovativeness
2. Training and retraining should be arranged for all vocational and technical education teachers to improve on their effective skills in entrepreneurship

education

3. Students industrial work experience should be revitalized and well sponsored
4. Student should be encouraged by vocational and technical educators to take entrepreneurship risk.
5. Better coordination and organization of the professional development programs is necessary, as well as improvements in the school curriculum, infrastructure upgrades, and availability of supporting learning materials for entrepreneurship
6. Entrepreneurship skills fieldwork should be organized to construction enterprises for the students so that it can serve as career motivation for the students.
7. Improvement in the school curriculum as well as uniformity of curriculum across all technical schools.
8. Availability of supporting learning materials for entrepreneurship.

## **5.6 Suggestion for Further Research**

The following suggestions have been made for further research:

1. Investigation into the ways of improving the teaching of entrepreneurship skills in Construction trade in technical colleges in other States of federation.
2. Facilities required for the establishment of Building Construction small and medium scale industries in Niger State
3. Skills improvement needs of teachers for effective teaching of Construction trade to students of technical colleges in Niger State.

Capacity building needs of teachers for effective teaching of Construction trade to students of technical colleges in Niger State.

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## **APPENDICES A**



**APPENDICES B.**  
**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION**  
**QUESTIONNAIRE ON WAYS TO IMPROVE THE TEACHING OF**  
**ENTREPRENEURIAL SKILLS IN CONSTRUCTION TRADES IN TECHNICAL**  
**COLLEGES IN MINNA.**

**SECTION A**

Please tick ( ) in the boxes as appropriate in response to the following question.

1. Name of organization (optional); \_\_\_\_\_

**2. Number of years of incorporation;**

(a) 0 – 5 years (b) 6 -10 years (c) 11 – 15 years (d) 16 – 20 years (e) over 20 years

**3. Number of Employees;**

(a) 1 – 10 employees (b) 10 – 20 employees (c) 20 – 30 employees (d) 30 – 40 employees  
(e) Over 40 employees

**4. Average years of experience of respondents;**

(a) 0 – 5 years (b) 6 – 10 years (c) 11 – 15 years (d) 16 -20 years (e) over 20 years

**Note:**

Highly Needed (HN) - 4

Moderately Needed (MN) - 3

Needed (N) - 2

Not Needed (NN) - 1

**5. Respondents**

(a) Staff (b) Student

**What are the entrepreneurial skills students of construction trade should possess when graduating from Technical Colleges in Nigeria?**

S/NO	ITEMS	HN	MN	N	NN
1	Technical skills				
2	Personal Branding skills				
3	Team-work skills				
4	Economic and adaptability skills				
5	Work ethics and corporate performance				
6	Communication skills				
7	People Management skills				
8	Design Thinking				
9	Financial Management				
10	Sales and Marketing				
11	Organizational skill				
12	Strategy Formulation				
13	Relationship Building				
14	Hiring and Talent Sourcing				
15	Innovativeness				
16	Human Resource Management				
17	Risk Management				
18	Business planning and development				
19	Creativeness				

**What are the challenges of teaching entrepreneurship skills in Technical Colleges in Nigeria?**

S/NO	ITEMS	HN	MM	N	NN
1	Lack of funds				
2	Inadequate supply of consumable				
3	Inadequate internal and external quality control mechanisms.				
4	Lack of interest on the part of the students				
5	No provision of in-service training for teachers				
6	Absence of curricular capacity to support the training				
7	Lack of infrastructural support				

8	Favourable policy environment and lack of government support				
9	Overemphasis on theory delivery				
10	Capacity of Teachers/instructors				
11	Low Standards & Quality assurance in technical college				
12	Absence of inadequate and functional Curriculum.				
13	Inadequate internal and external quality control mechanisms.				
14	Limited school inspections by the superintending agency				
15	Teacher: Student ratio still very wide in many technical colleges while leaching facilities are extremely limited.				
16	Very poor ICT deployments				

**What are the ways to improve the teaching of entrepreneurship skills in Technical Colleges in Nigeria?**

S/NO	ITEMS	HN	MN	N	NN
1	Teachers should diversify use of teaching methods specifically those that emphasize learning - by - doing approach				
2	Technical Colleges should identify and partner with businesses to strengthen the practical component of teaching.				
3	Establish quality assurance agencies by Government				
4	Introduce Scholarship and Students' Loan Programmes for students who have shown excellence in demonstrating entrepreneurial skills.				
5	Use of electronic learning facilities for teaching students can help to improve the entrepreneurial competencies of students				
6	Enacting and faithful implementation of Policies that promote entrepreneurship				
7	Integrate high-quality, nonfiction concepts into the curriculum.				
8	Introduce project-based learning (PBL)				
9	Institutionalize regular training and re-training of teachers along entrepreneurial lines				

10	Provision of direct assistant to facilitate and enable teachers organize excursions to business ventures hereby reinforcing what they have been taught in the classroom				
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## APPENDICES C

### FORMULA

#### MEAN ( $\bar{X}$ ) formula

$$\text{Mean } (\bar{X}) = \frac{\sum fx}{\sum f}$$

$\bar{X}$  = Mean response of each group of respondents

$\sum$  = The sum of

X = The score on the rating scale

F = The frequency of each point on the rating scale

#### Standard Deviation (SD) Formula

$$SD = \sqrt{\frac{\sum f(x-\bar{x})^2}{\sum f}}$$

$\bar{X}$  = Mean response of each group of respondents

$\sum$  = The sum of

X = The score on the rating scale

F = The frequency of each point on the rating scale

#### t – test Formula

$$t - \text{test} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

$\bar{X}_1$  = Mean response for First group of respondents

$\bar{X}_2$  = Mean response for Second group of respondents

$S_1$  = Variance of First group of respondents

$S_2$  = Variance of Second group of respondents

$N_1$  = Number of First group of respondents

$N_2$  = Number of Second group of respondents.