

By

**IBRAHIM, D. & MA'AJI, S.A. (Ph.D)**  
Department of Industrial and Technology Education  
Federal University of Technology Minna,  
Nigeria.

### **Abstract**

*This study was designed to determine the entrepreneurial skills needed by building technology teachers for effective teaching at technical colleges and to determine the strategies for effective teaching and learning of entrepreneurial skills. Two research questions guided the study. A survey design was adopted for the study. A structured questionnaire was used to collect data from the 68 respondents in all the state and federal technical colleges in Niger state. The data collected was analyzed using mean and standard deviation to answer the research questions. Findings on the study show that all the 21 suggested entrepreneurial skills were accepted by both the teachers and the administrator. The strategies suggested for enhancing effective teaching were accepted by both teachers and administrators. Recommendations were made among which were the review of the technical education curriculum to include entrepreneurship skills needed by the teachers of technical colleges, teachers be given opportunity for in service training in the field areas of entrepreneurship skills acquisition in order to update their knowledge and thus enable them perform well in their teaching.*

### **Introduction**

Technical and vocational education is a vital form of education for any nation because; it provides the trained manpower needed for rapid technological and industrial development. The impact of this form of education in national development depends on the level of teachers and the entrepreneurship skills possessed for effective teaching. The importance of competent teachers with entrepreneurship skills cannot be overemphasized especially at this time when the labour market is over stretched (Odekunle 2000). The Federal Government of Nigeria (FRN, 2004), in the National Policy on Education, pointed out that the goal of technical and vocational education is to provide the professional training and equip technical teachers for effective performance of their duties. Without adequate skills and training, teachers cannot effectively guide the students' (Okorie, 2000). Teachers and entrepreneurship skills represent the existing gap between the expected pedagogical abilities and the actual performance of the teachers. Kolo (2004) stated that the Nigeria teachers have been held responsible to a large extent for disappointing quality of education. Thus, the study of entrepreneurship skills needed by the building technology teacher is imperative.

The concept of entrepreneurship skills has a lot to do with how several activities are carried out in organization for effective operations. Madueke (2007) described entrepreneurship as the initiatives, imagination, flexibility, creativity and willingness to think conceptually and having a capacity to see the need and change it to opportunity.



Also, in his view, Adeyeye (2008) saw entrepreneurship as the process of identifying opportunities or bringing together creative and innovative ideas coupled with the management and organizational skills, to meet an identified need and thereby create employment and wealth. In the light of this, the growth of entrepreneurship skills is central to the growing knowledge of the teachers. For improved entrepreneurship participation on any field, appropriate skills are required by the teachers to boost economic return. The National Directorate of Employment (NDE) (2003) observed that among the expectations of the Federal Government in the National Policy on Education is the introduction of skills acquisition subjects in Technical College curriculum. Building technology is a cluster of trades in which skills oriented subjects can help an individual to become self employed in areas such as Block work, brick work, concreting, finishing, block moulding, painting, plumbing and land scaping. Exposing students to the trades will provide them with skills that can make them highly productive and therefore, become employable in either paid or self employment.

Johnson (2003) reported that when people acquire skills, especially in the area of decisions making; commitments and taking risks that are very important in the life of a successful entrepreneur, they would be able to establish their enterprises and manage them. This view agrees with that of Mamman (2008), who opined that vocational and technology education teachers prepare graduates toward acquisition or realizing certain traits (skills) which form a basis for success in entrepreneurship. Entrepreneurship skills acquisition could enable the student bridge the gap between the unemployed and the employed when the skills are properly imparted to them by the teachers (Kolo, 2004). He stated that when students are equipped with entrepreneurial skills or made to exploit their potentials, they would be employed upon graduation. Brenner and Grief (2003) in their opinions, stated that teachers should be equipped with some entrepreneurial skills to facilitate effective teaching of the course which includes stock management skills, decision making skill, customer service skills, feasibility study skills, personnel management skill, insurance/ risk taking and management skills, proposal writing skills, leadership skills, financial management skills among others. With these characteristic (skills) an individual can assess whether he/ she can be successful entrepreneur or not. They are of the view that where some deficiencies are discovered in teachers, students may not acquire the needed skills to be gainfully employed. A very good number of graduates who did not acquire the entrepreneurial skills and cannot further their educations immediately, are now roaming the streets. They have become problem to themselves and the society. Perhaps what those students lack from their teachers is the entrepreneurial skills which if they have, the stories might be different.

For effective teaching of entrepreneurial skills at technical college level, teachers of building technology should be abreast with the latest teaching strategies to enhance effective teaching and learning. Atsumbe (1994) stressed that for effective teaching to take place, skilled teachers need to use different methods and have skilled techniques of teaching at his command. Gradstein and Dustman (2002) stated that, the materials for enterprise learning and teaching matrix (MELT) should contain a range of teaching slides. Adamu (2004) also suggested that inviting resource persons regularly would enhance effective teaching and thereby encourage students on the benefits of being self employed. Organizing seminars and workshops on entrepreneurship skills every month for the teachers will help teachers to see and hear entrepreneurs and be able to impart



effectively to the students. Madueke (2007) suggested that, if the following strategies are put in place, effective teaching and learning of entrepreneurship skills will be ascertained. These strategies according to Madueke include: motivating teachers' interest through rewards; incentives and value statement; re training of staff in entrepreneurial skills; adequate funding of the department to effectively teach the skills; provision of capital to encourage staff towards entrepreneurship; and collaboration with local and foreign renowned entrepreneurial education research institutions.

### **Purpose of the study**

The study was designed to identify the entrepreneurship skills needed by building technology teachers for effective teaching of entrepreneurship skills at technical college level of Niger state, Nigeria. Specifically, the study was carried out to find out the followings among others.

1. Entrepreneurial skills needed by building technology teachers.
2. Determined strategies for enhancing the teaching and learning of entrepreneurial skills.

### **Research Questions**

The following research questions guided the study.

1. What are the entrepreneurial skills needed by building technology teachers for effective teaching of entrepreneurial skills at the technical colleges level in Niger state, Nigeria?
2. What are the strategies for enhancing the teaching and learning of entrepreneurial skills?

### **Hypothesis**

The following hypothesis was formulated to guide the study and was tested at 0.05 level of significance.

$H_0$ : There is no significant difference between the mean responses of teachers and administrators with respect to their perception on the entrepreneurial skills needed by building technology teachers for effective teaching of entrepreneurial skills at technical colleges' level in Niger state, Nigeria.

### **Area of the Study**

This study was conducted in all the state Technical Colleges in Niger State and Federal Science and Technical College Kuta. Niger State shares boundaries with Kaduna State to the west, Kebbi State to the North West, and Sokoto State to the north, Kwara State to the south, Kogi to south east and Federal Capital Territory (FCT) to the east.

### **Population**

The target population for this study consisted of all the 68 respondents. This includes all the building technology teachers and 21 administrators of all the state and federal technical colleges in Niger state, Nigeria. Since all the teachers and the entire administrators constituted the population of the study, it was considered manageable and therefore, there was no sampling for the study. The Table below shows the distribution of



population in each technical college of Niger State.

**Table 1: Distribution of Population for the Study**

S/No	Name of Institution	Number of Building technology teachers	Number of administrators.
1	Government Technical College, Bida	13	3
2	Government Technical College, Suleja	7	3
3	Government Technical College, Minna	12	3
4	Federal Science and Technical College, Kuta	4	3
5	Mamman Kontagora Technical College, Pandogari	7	3
6	Government Technical College, Kontagora	4	3
7	Government Technical College, New Bussa	4	3
<b>Total Population</b>		<b>47</b>	<b>21</b>

*Source: Niger State Science and Technical Schools Board, 2011.*

### **Instrument for Data Collection**

The instrument for data collection was a structured questionnaire. The instrument was developed by the researcher using information obtained from literature. A four - point rating scale with the following response categories and their assigned numerical values were used in the instrument: strongly agree (4); agree (3); strongly disagree (2) and disagree (1).

### **Validation of the Instrument**

The questionnaire developed was subjected to face and content validation. Three experts drawn from Industrial and Technology Education Department, Building Technology Department, Federal University of Technology, Minna were the validators. The experts were requested to evaluate the questionnaire in terms of appropriateness, relevance and language. Suggestion and modifications by the experts guided the production of the final copy of the questionnaire before it was administered.

### **Reliability of the Instrument**

The reliability of the developed instrument was established after a try-out using the item by item technique fashioned along Gay's (1981), inter-rater reliability concept. The result of the trial test was used to compute the reliability of the instrument using Cronbach's Alpha method to ascertain the extent of homogeneity of the items. The result obtained revealed that the reliability coefficient was 0.79. This means that items in the instruments were internally consistent in measuring what was intended to be measured for the study.

### **Method of Data Analysis**

Data collected for the study was analyzed using mean and standard deviation to answer research questionnaire while t-test statistics was used to test the hypothesis at 0.05 level of significance.

**Decision rule**

To determine the acceptance, the resulting mean scores was interpreted relative to the number 1-4 as used on the rating scale adopted for the study. It means that items with mean value of 2.50 and above were considered as accepted while items with mean value of 2.49 and below were considered as rejected. The hypothesis was tested using t-test at 0.05 level of significant. Where the calculated t- test value was equal or greater than t- table value, the null hypothesis was rejected meaning there was significant difference and where the calculated t- test value is less than the t- table value, the null hypothesis was accepted, that is there was no significant difference.

**Research Question 1**

What are the entrepreneurial skills needed by building technology teachers for effective teaching of entrepreneurial skills at technical colleges level in Niger State, Nigeria?

**Table 1: Mean Responses of Teachers and Administrator on the Entrepreneurial Skills Needed by Building Technology Teachers in Technical Colleges in Niger State for Effective Teaching.**

S/NO	ITEMS	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_t$	Remark
1	Customer service skills	3.45	3.59	3.52	Agreed
2	Financial management skills	3.56	3.21	3.39	Agreed
3	Personnel management skills	3.89	3.02	3.46	Agreed
4	Tax management skills	3.46	2.68	3.07	Agreed
5	Stock management skills	3.09	3.79	3.44	Agreed
6	Planning and evaluation skills	2.86	2.80	2.83	Agreed
7	Reading skills	3.50	3.26	3.38	Agreed
8	Decision making skills	3.72	2.68	3.20	Agreed
9	Marketing skills	3.49	3.12	3.31	Agreed
10	Sales skills	3.29	2.78	3.04	Agreed
11	Feasibility study skills	2.99	3.45	3.22	Agreed
12	Negotiation skills	3.31	2.89	3.10	Agreed
13	Risk taking/ insurance and management Skills	2.56	2.76	2.66	Agreed
14	Leadership skills	4.12	2.97	3.55	Agreed
15	Production management skills	3.27	2.51	2.89	Agreed
16	Time management skills	2.87	3.44	3.15	Agreed
17	Record keeping skills	3.04	2.90	2.97	Agreed
18	Writing skills	2.53	2.62	2.58	Agreed
19	Reading skills	3.12	2.91	3.02	Agreed
20	Business management skills	2.78	2.94	2.86	Agreed
21	Organizing and mobilizing skills	3.86	3.49	3.68	Agreed

**Key**  
 $\bar{X}_1$  = Mean scores of teachers  
 $\bar{X}_2$  = Mean scores of administrator  
 $\bar{X}_t$  = Average mean of teachers and administrator



The data in Table 1 revealed that respondents agreed with all the items with mean scores between 2.51 4.12 respectively. This signifies that all the items suggested as the entrepreneurial skills are needed by the building technology teachers in all technical colleges for effective teaching of the skills.

**Research Question II**

What are the strategies for enhancing the teaching and learning of entrepreneurial skills?

**Table 2: Mean Responses of Teachers and the Administrator on the Strategies For Enhancing the Teaching and Learning of Entrepreneurship Skills at Technical College.**

S/NO	ITEMS	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_t$	Remark
1.	Teachers should be sent on sabbatical leave to business industries	3.63	3.93	3.78	Agreed
2.	Organizing seminars and workshops on Entrepreneurship skills every month for the teachers	3.62	3.92	3.77	Agreed
3.	Teachers' interest should be enhanced through rewards, incentives and value statement	3.54	3.94	3.74	Agreed
4.	Re – training of staff in entrepreneurial skills	3.39	3.69	3.54	Agreed
5.	Adequate funding of the department to Effectively teach the skills	3.79	3.49	3.64	Agreed
6.	Financial institutions should sponsor researches Especially in entrepreneurial education	3.97	3.78	3.88	Agreed
7.	Provision of capital to encourage staff towards entrepreneurship.	2.63	3.89	3.26	Agreed
8.	Post students to business industries for SIWES	2.54	2.62	2.58	Agreed
9.	Collaboration with local and foreign renowned entrepreneurial education research institution	3.39	3.49	3.44	Agreed

The data in Table 2 revealed that respondents agreed with all the items with mean scores between 2.54 and 3.97 respectively. This signifies that, all of the items suggested as strategies for enhancing effective teaching of entrepreneurial skills are accepted by the building technology teachers in all technical colleges and the administrators for effective teaching of the skills.

**Hypothesis Testing**

**Hypothesis 1**

$H_{01}$ : There is no significant difference between the mean responses of teachers and the administrators with respect to the entrepreneurial needed by building technology teachers at technical colleges.



Table 3: t- test of Mean Responses of Teachers and Administrator on the Entrepreneurship Skills Needed by the Building Technology Teachers.

S/NO	ITEMS	$\bar{X}_1$	$\bar{X}_2$	SD <sub>1</sub>	SD <sub>2</sub>	total	Decision
1.	Customer service skills	3.45	3.59	0.72	0.61	0.86	Not significant
2.	Financial management skills	3.56	3.21	-1.54	1.08	-1.24	Not significant
3.	Personnel management skills	3.89	3.02	0.57	0.19	0.67	Not significant
4.	Tax management skills	3.46	2.68	1.89	0.41	1.00	Not significant
5.	Stock management skills	3.09	3.79	0.34	0.67	0.96	Not significant
6.	Planning and evaluation skills	2.86	2.80	0.44	0.49	-0.08	Not significant
7.	Reading skills	3.50	3.26	0.50	0.09	0.61	Not significant
8.	Decision making skills	3.72	2.68	0.29	0.16	-1.50	Not significant
9.	Marketing skills	3.49	3.12	0.10	0.23	0.25	Not significant
10.	Sales skills	3.29	2.78	0.88	0.44	0.50	Not significant
11.	Feasibility study skills	2.99	3.45	0.50	0.16	-1.50	Not significant
12.	Negotiation skills	3.31	2.89	0.23	0.20	-1.37	Not significant
13.	Risk taking/ insurance and management Skills	2.56	2.76	0.87	0.43	0.18	Not significant
14.	Leadership skills	4.12	2.97	0.32	0.45	0.75	Not significant
15.	Production management skills	3.27	2.51	0.29	0.56	-2.70	Not significant
16.	Time management skills	2.87	3.44	0.22	0.19	-0.67	Not significant
17.	Record keeping skills	3.04	2.90	0.49	0.34	0.88	Not significant
18.	Writing skills	2.53	2.62	0.34	0.54	0.98	Not significant
19.	Reading skills	3.12	2.91	0.99	0.66	1.07	Not significant
20.	Business management skills	2.78	2.94	0.07	0.61	0.90	Not significant
21.	Organizing and mobilizing skills	3.86	3.49	0.54	0.78	0.06	Not significant

Note  $N_1 = 47; N_2 = 21; df = N_1 + N_2 - 2 = 66; t_{66} (0.05) = 2.000$

**Key**

$N_1$  = Number of Teachers

$N_2$  = Number of Administrators

SD<sub>1</sub> = Standard Deviation of Teachers

SD<sub>2</sub> = Standard Deviation of Administrators

The result in Table 3 revealed that the t- calculated values of the 21 items were less than the t- table values. Therefore, the null hypothesis was accepted for each of the twenty one items as regards the entrepreneurial skills needed by building technology teachers.

**Discussion of findings**

Research question one dealt with the entrepreneurial skills needed by building technology teachers. The findings as indicated in Table 1 revealed that all entrepreneurial skills suggested were appropriate and needed. This finding is in agreement with the views of Brenner and Grief (2003) who noted that teachers should be equipped with some entrepreneurial skills such as stock management skills; decision making skill; customer service skills; feasibility study skills; personnel management skill; insurance/ risk taking and management skills; proposal writing skills; leadership skills; and financial



management skills to facilitate effective teaching of the courses. With these skills an individual can assess whether he/she can be successful entrepreneur or not. Supporting the assertion is Odekunle (2000) who stated that the importance of competent teachers with entrepreneurship skills cannot be overemphasized especially at this time when the labour market is over stretched.

Research question two dealt with the strategies for enhancing the teaching and learning of entrepreneurial skills at technical colleges in Niger state. The findings in Table two revealed that, all the nine (9) items were accepted by both the teachers and the administrators that teacher can teach students' using the suggested strategies to arouse the interest of the students and concretized the lesson presentation. This finding is in agreement with the view of Gradstein and Dustman (2002) who stated that, for teaching and learning of entrepreneurship, materials for enterprise learning and teaching matrix (MELT) should contain a range of teaching slides. Supporting the above opinion, Adamu (2004) stated that, organizing seminars and workshops on entrepreneurship skills every month for the teachers, will help teachers to see and hear entrepreneurs and be able to impart effectively to the students. Madueke (2007) suggested that, if the following strategies are being put in place, effective teaching and learning of entrepreneurship skills will be ascertained. These strategies according to Madueke include; teachers' interest through rewards, incentives and value statement, re training of staff in entrepreneurial skills, adequate funding of the department to effectively teach the skills, provision of capital to encourage staff towards entrepreneurship and collaboration with local and foreign renowned Entrepreneurial education research institution.

## **Conclusion**

This study was meant to determine entrepreneurial skills needed by building technology teachers of technical colleges and also to identify strategies for enhancing effective teaching of entrepreneurship skills. Base on the findings of this study, the following conclusion were made: The findings of this study have generally revealed that, organizing and mobilizing skills; leadership skills; customer service skills; personnel management skills and decision making skills is a necessary skill that a building technology teacher should have if he/ she must succeed in their teaching profession. However, one of the factors responsible for the decline of entrepreneurial skill acquisition in technical colleges may be attributed to lack of entrepreneurial skills by teachers for effective teaching. It is concluded that when teachers' abilities are enhanced with the needed skills and teach students the necessary entrepreneurial skills, the students will be more enterprising and successful businessman and woman.

## **Recommendations**

The following recommendations were made based on the finding and conclusions drawn on this study

1. Workshop and seminars should be organized in all the technical colleges and experts invited to give lectures on different areas of entrepreneurial skills.
2. Teachers' interest should be enhanced through rewards, incentives and value statement.
3. Re training of staff in entrepreneurial skills should be encouraged.



4. Adequate funding of the department to effectively teach entrepreneurship skills and
5. Collaboration with local and foreign renowned entrepreneurial education research institutions should be encouraged and funded.

### Reference

- Adamu, V. (2004). *Building entrepreneurship economics*. Ibadan: University Nigeria Press.
- Adeyeye, M. M. (2008). *A fundamental approach to entrepreneurship*. Small and medium enterprises, Panse press limited, Minna, 1<sup>st</sup> edition.
- Atsumbe, B. N. (1994). *Strategies for improving the preparation of introductory technology Teachers in Kogi State*. Unpublished M. ED Thesis, department of vocational Teacher education. University of Nigeria, Nsukka.
- Brenner, T. & Grief, T. (2003). *Evolutionary economics*. Germany: Max plank Institute.
- Federal Republic of Nigeria (2004). *National Policy on Education 4<sup>th</sup> Edition* Lagos: NERDC Publisher.
- Gradstein, M. & Dustman, M. (2002). *Human capital, social capital and public schooling* *European economic review*, 879- 897. Washington D. C. The World Bank press.
- Johnson, T. (2003). *Technical education and vocational training: Strategies in Asia*. Bombai: India, Software Industries.
- Kolo, M. (2004). *Programme delivery in brief*. Kaduna. National Directorate for Employment (NDE) Kaduna, Nigeria.
- Mamman, A. (2008). *Entrepreneurship development and poverty alleviation in Nigeria*: Joyce graphic printers and publishers.
- Madueke, A. (2007). *Sustainable development of invention and innovation in ECOWAS Sub- region: Bridging the Entrepreneurship gap*. A paper presented at the expert forum for Africa's Technological Development, Federal University of Technology, Minna.
- National Directorate of Employment (2003). *Entrepreneurship development programme for youth corps members*. Abuja: Federal Republic of Nigeria.
- Odekunle, S. O. (2000). *Skill acquisition as a determinant of entrepreneurship success in Nigeria: A case study of Ikirun Informal Sector*. Ibadan: NISER.
- Okorie, J.U. (2000). *Developing Nigeria's workforce*. Calabar: Mackey Environs publishers.