

Potentials for Improving Entrepreneurial Competencies Acquired By Electronic Technical College Graduates for Establishing Enterprise, In Nigeria

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Abstract

The study look at the potentials for improving entrepreneurial competencies acquired by technical college for establishing enterprise. Survey design was adopted for the study. The population comprised Nine Electronics Teachers, 47 Electronics technical college graduates and 72 part III Electronics students. Four research questions were raised for the study, while, Analysis of Variance (ANOVA) was employed to test the hypothesis at 0.05 level of significance. A structured 29 items questionnaire divided into three sections were used to elicit information from the respondents, using a five point Likert scale. Mean and standard deviation were used to answer the research questions. The major finding of the study includes; all the generic skills are emphasized by the school and the respondents agreed with all the items except career club as potentials for improving the competencies acquired by the graduates of electronics for establishing enterprise. It was recommended among others that, students should readily accept suggestions and corrections from fellow graduates to allow improvement on themselves.

Keywords: Potentials, Entrepreneurial competencies, Electronics, Technical college, Enterprise, Graduates

1.0 Introduction

Technical and Vocational Education and Training (TVET) Programmes are offered for the purpose of producing skilled manpower required for the nation's economic and technology development [federal Republic of Nigeria [(FRN), 2013]. According to Okoro (2006), Technical Education Curriculum is a series of a course, activities and experiences designed for the acquisition of practical and applied skills, knowledge and good attitude for gainful employment. Technical education curriculums are designed to prepare individuals job cluster as well as specific occupation, based on framed work and traditional subjects and disciplines. According to the National Business and Technical Examination Board (NABTEB) syllabus (2013), Radio Television and Electronics work (or Electronics) is among the trades offered at the technical college level to provide entrepreneurial competency skills. These trades are known as engineering trades and they are practically oriented (NABTEB, 2013).

Technical college students need skills that are flexible and relevant to demands of today's industry. However, increasing industrial complexity has shifted focus to coordination and communication. Beyond job specific competencies, a set of skills which are generic of occupation in the knowledge based economy is necessary. Thus, employers are putting more weight on generic skills (Firth, 2011). Kearns (2001) defines generic skills as key competencies that can be used across a large number of different occupations provide a platform for the development of employability skills needed by young people and adults. Generic skills involve little or no interaction with machines, but help individuals maintain positive social relationships and contribute to the work environment. Key generic skills include communication and interpersonal skills, problem solving skills, using your initiative and being self-motivated, working under pressure and to deadlines, organizational skills, team working, ability to learn and adapt, using mathematical ideas and Technique.

These skills are independent of sector, underpin technical skills and drawn on personal attributes.

As an offshoot of this study, facts on the entrepreneurship may cultivate the demand for applied concepts of the course. When a person setup a business of his own where he can apply the knowledge and skills and competencies possessed for production of goods and services, it is known as small and medium enterprises (SMES). The production of goods and services in the most efficient manner through the development of SMES has been recognized in both developed and developing countries as one of the viable and reliable means for development, growth and survival of any nation's economy.

According to Okafor (2011) developed countries such as United States of America, Japan and France that have made economy breakthrough demonstrate beyond doubt that the development of SMES enhances economic growth and development. In a developing country such as Nigeria, integration of SMES into the global economy is seen as the best way to overcome poverty and inequality.

The high rate of unemployment among the technical college students after graduation has been attributed to inability of the students to identify and nurture their personal entrepreneurial competencies and skills required in the world of work while in schools (Dawha, 2015). However, because they do not realize this or identify these skills and competencies and nurture them while in school, they cannot use them to establish an entrepreneur and manage or run it successfully. Hence, the study was designed, to identify potentials for improving entrepreneurship competencies required by technical college graduates for establishing small and medium scale enterprises.

The study sought to:

1. Find out the generic skills possessed by Electronic graduates for setting enterprise?
2. Find out potentials for improving the entrepreneurial competencies acquired.
3. Find out challenges encountered in the process of entrepreneurship training.

1.2 Research Questions

The following research questions were answered in this study;

- i. What generic skills possessed by Electronics graduates for setting enterprise?
- ii. What are the Potentials for improving the competencies acquired?
- iii. What are the challenges encountered in the process of entrepreneurship training?

1.3 Hypothesis Testing

HO₁: There is no significant difference among the mean responses of teachers, graduates and students on the potentials for improving the competencies acquired

2.0 Methodology

The study was undertaken in Taraba and Adamawa states technical colleges. The two states were the former Gongola state and located in the North-Eastern part of Nigeria. The states have one technical college each that offer electronics. The technical colleges are; Government Technical College, Yola Adamawa state and Government Technical Training School Jalingo, Taraba State.

The population comprised nine electronics teachers, 47 electronics technical college graduates and 72 part III Electronics students in the two states technical colleges duly accredited by the National Board for Technical Education (NBTE). The total number of subjects that constituted the population, serve as the sample for the study. There was no sampling made, because the population was manageable.

The survey design was adopted for the study. The instrument for data collection was a 29 items structured questionnaire tagged, questionnaire for improving entrepreneurial competencies acquired by Technical College Graduates (QIECATCG) in Adamawa and Taraba States. The questionnaire consists of five sections: Section A, requests personal information about the respondents.

Section B, C and D, contains research items for answering the three research questions respectively and were scored using a five point Likert scale. The draft of QIECATCG was given to two experts from Modibbo Adama University of Technology, Yola, two from Abubakar Tafawa Balewa University, Bauchi and two Directors of Science and Technical Education, are each from Adamawa and Taraba states Ministries of Education, for face and content validation.

The instruments were later pilot tested at Government Science and Technical College Kumo, Gombe State. QIECATCG was administered to 04 teachers, 15 graduates and 31 part III students. The instruments were re-administered after two weeks. A reliability coefficient of 0.78 was obtained and was found to be acceptable. According to Iheamacho (1997), a reliability of 0.70 and above is desirable.

The questionnaire was directly administered to the teachers, graduates and the students with the aid of research assistants that were trained by the researcher. Mean and standard deviation were used to answer the research questions. The micro soft excel was employed for the analysis. The decision rule for answering the research questions was based on the real limit of numbers. The criterion mean was 3.00, while lower and upper limit of 3.00 was 2.50 and 3.50 respectively. Therefore, any mean rating from 3.50 and above was considered agreed or required, and where otherwise, was disagreed. For the hypothesis, analysis of variance (ANOVA) was employed and tested at 0.05 level of significance.

3.0 Results

3.1 Research Question I: What generic skills possessed by electronic graduates for setting enterprises?

Table 1: Generic skills possessed by Electronic graduates

S/N	IDENTIFIED GENERIC SKILLS	\bar{X}	S	REMARK
1.	Communication and interpersonal skills	3.50	0.62	Agreed
2.	Being able to use mathematical ideas and techniques	3.54	0.78	Agreed
3.	Being able to solve problems	3.56	0.57	Agreed
4.	Being able to interpret electronics circuits	4.10	0.43	Agreed
5.	Being able to collect, analyze and organize information	3.52	0.68	Agreed
6.	Ability to learn and adapt circuit	4.08	0.72	Agreed
7.	Team working skills	3.55	0.55	Agreed
8.	Being creative and innovative in work	3.50	0.55	Agreed
9.	Being able to plan and organize practical activities	3.57	0.49	Agreed
10.	Being adaptable to change or replace components at work	3.64	0.53	Agreed

Key: \bar{X} = mean

S = standard deviation

Table I, revealed that, all the generic skills are emphasized by the school. Being able to use ICT and ability to learn and adopt were the most popular with mean score of 4.10 and 4.08 respectively.

3.2 Research Question II: What are the potentials for improving the entrepreneurial competencies acquired?

Table II: Responses of the entrepreneurial potentials for improving the competencies acquired

S/N	IDENTIFIED POTENTIALS	\bar{X}	S	REMARK
11	International with successful entrepreneur	3.65	0.66	Agreed
12	Attending conferences, workshops and electronics Laboratory	3.56	0.34	Agreed
13	Through the encouragement from others	3.66	0.58	Agreed
14	Accepting connections and suggestion from fellow graduates for improvement	3.88	0.82	Agreed
15	Exploiting opportunity for advancement and improvement	3.52	0.55	Agreed
16	Acquisition of skills through apprenticeship system	3.78	0.58	Agreed
17	Acquisition of skills through industrial training programme	3.55	0.64	Agreed
18	Acquisition of skills through career club	2.18	0.81	Disagreed
19	Acquisition of skills through Vocation employment programme	3.57	0.56	Agreed

Key: \bar{X} = mean

S = standard deviation

Table II indicates that, the respondents agreed with all the items as potentials for improving the entrepreneurial competencies acquired, except item 18 which has the lowest mean of 2.18

3.3 Research Question III: What are the challenges encountered in the process of entrepreneurship training?

Table III: Challenges encountered in the process of entrepreneurship training

S/N	IDENTIFIED CHALLENGES	\bar{X}	S	REMARK
20	Inadequate number of trained teachers	3.52	0.62	Agreed
21	Lack of text books	3.56	0.81	Agreed
22	Portfolio of knowledge of many entrepreneur trainers is relatively narrow	3.50	0.72	Agreed
23	Grouping students of various aspiration together	3.56	0.85	Agreed
24	Core competencies needed by the students are not taught	2.23	0.63	Disagreed
25	The paradigm behind education and training of entrepreneur is still basically of a technical nature	3.57	0.72	Agreed
26	Teaching of entrepreneurship skills takes no account of the reality that entrepreneurship has to do with management	3.90	0.57	Agreed
27	Using traditional education methods to develop entrepreneurs do not give adequate training	2.01	0.68	Disagreed
28	Education system emphasizes a set of values and activities which is inimical to an entrepreneurial spirit	3.91	0.81	Agreed
29	Concrete experience. Reflective observation, abstract conceptualization and active circuit-simulation are not used in teaching	4.02	0.57	Agreed

Key: \bar{X} = mean

S = standard deviation

Data in table III showed that, the respondents agreed with all the items as challenges encountered in the process of entrepreneurship training except items 23 and 27. This shows that the two items are not challenges.

3.4 Hypothesis Testing

HO₁: There is no significant difference among the mean responses of teachers, graduates and students on the potentials for improving the competencies acquired

Table IV: ANOVA comparison of mean scores of teachers, graduates and students

Source	Sum of squares	df	Mean square	F	Sig (P)	Remark
Between group	466.12	2	233.06	1.55	0.21	NS
Within group	17536.93	117	149.88			
Total	18003.06					

Key: NS = not significant

From table IV, the F-value of 1.55 was not significant at the 0.05 level. This indicates that there are no statistically significant differences among the opinion of teachers, graduates and students on the potentials for improving the competencies acquired. Hence, hypothesis one accepted.

4.0 Major Findings of the Study

1. Findings revealed that, the respondents agreed that, all the generic skills in table I, are emphasized by the school
2. Table II revealed that the respondents agreed with all the items except item 18 (through career club) as a potential for improving the competencies acquired by the students of technical and vocational education for employment.
3. Data in table III, showed that the respondents agreed with all items as challenges encountered in the process of entrepreneurship training except items 24 and 27.
4. Table 5, shows, there is no significant difference among the mean responses of teachers and students on the potentials for improving the competencies acquired. This means, all the groups agreed on the potentials for improving the competencies acquired.

5.0 Discussion of findings

The finding in table 1, revealed that the respondents agreed that they possessed all the genetic skills. However, being able to interpret electronic circuits and ability to learn and adapt circuits were the most popular with mean score of 4.10 and 4.08 respectively. The findings agree with Imeokparia and Ediagboniya (2012) when they said Electrical/Electronic students have high employability skills.

It was deduced from the study that there are various ways for improving competencies of an entrepreneur. These include: accepting corrections and suggestions from fellow students for improvement, exploiting opportunities for advancement and improvement on the acquisition of skills through apprenticeship system. The competencies are not taught in the classroom but can be acquired in the process of training. There was no significant difference between the mean responses of teachers, graduates and students on the potential for improving the competences acquired

The findings in table III, revealed that there are a number of challenges facing the proper training of entrepreneur. These challenges include; inadequate number of trained teachers, portfolios knowledge of many entrepreneur trainers is relatively narrow and grouping students of various aspiration together. According to Kiggundy, (2014) there is dearth of qualified personnel to teach entrepreneurship education in technical colleges. The available teachers can handle the technical skills but cannot effectively teach the entrepreneurship aspect.

6.0 Conclusion

To enter and make progress in the world of work and to keep abreast of changes in job descriptions, Electronics students need to also develop generic skills to increase their employability. The role of an entrepreneurial competency is highly a critical factor in achieving excellence in performance, to ensure a sustainable growth and success of a venture amidst a competitive business enterprise.

7.0 Recommendations

Based on the findings of the study, the following recommendations were proffered

1. Teachers should stress the importance of generic skills to students
2. Students should readily accept suggestions and corrections from fellow graduates to allow improvement on themselves
3. Enough trained teachers should be employed to teach the entrepreneurship competencies.

8.0 References

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