Vocational Skills Acquisition for Entrepreneurship Development and Technological Advancement in Industrial Technology Education: A Strategic Approach to surmount Economic Recession in Nigeria

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Abstract
The study examined Vocational Skills Acquisition for Entrepreneurship Development and Technological Advancement in Industrial Technology Education as a Strategic Approach to surmount Economic Recession in Nigeria. The population of the study comprised one thousand nine hundred and four (1,904) in tertiary institutions offering TVET programmes in Rivers State. A total of 225 respondents (200 students and 25 lecturers) was the sample of the study selected through systematic sampling technique. One research question was posed and one hypothesis formulated for this study. A structured questionnaire validated and with reliability coefficient of 0.91 was the instrument used for data collection. Data collected were analyzed using statistical mean to answer the research question while t-test statistical tool was used to test the null hypothesis at 5% level of significance. The result revealed skill acquisition in industrial technology education involves the mastery of practical skills and knowledge in any vocational and technical field of study. It was therefore recommended among others that: government should set-up a joint curricula of entrepreneurial, technical vocational education and training to x-ray the possibilities of mismatching skills knowledge and initiatives or the acquisition of skills for self-reliant and job creation; Entrepreneurial centres in our institutions in Nigeria must be equipped and utilized to assist universities and other institutions to bridge the gap created by the theoretical nature of our entrepreneurial, technical vocational education and training programme in our institution.

Keywords: *Vocational Skills Acquisition, Entrepreneurship Development, Technological Advancement, Industrial Technology Education and Economic Recession.*

Introduction

The economic and technological advancement of any nation is predominantly reliant on the level its technological know-how. That is, the extent to which a country is developed will

depend on the extent to which technological education (Industrial Technology) is encouraged and pursued (Jen, 2004). This implies that industrial technology education will determine the quality of industrial work-force which is a pre-requisite for economic and technological advancement and training worldwide. More so, industrial technology education empowers and prepares an individual to achieve its full potential for contribution to a better quality life. For the above reasons, some scholars such as Umunadi, (2010) and Obschonka, Silbereisen and Schmitt-Rodermund, (2010) noted that industrial technology education is a formal education designed to provide knowledge and skills underlying production processes with wider connotation at secondary or higher level. Thus, industrial technology education enables acquisition of skills and development of attitude and knowledge which will aid young people to play their part in the business community and help them to be self-reliant.

In affirmation of the above, Okorieocha and Taneh (2013) defined industrial technology education as the education that provides the skills, knowledge and attitude that lead to the production of individual who are resourceful and productive. Consequently, industrial technology education emphasizes skills, knowledge and attitudinal acquisition for productivity and self-reliance (Okorieocha and Musa, 2012). In the same vein, Onwuka (2000) observed that though an individual is empowered to develop capabilities and values for the benefits of the individual and that of the society. In assertion of the above, Bappah (2014) noted that individual can acquire education through the process of teaching, training and learning especially in institution to improve knowledge and develop skills. In the words of Anike (2014), industrial technology education aim at supplying manpower for employment and provide continuing training for those already qualified. In views of the above therefore, individual that is self-reliant can also be classified under entrepreneurial cadre because he/she is self-employed and a manager of his/her own organization. This implies that industrial technology education is result oriented which can bring about technological advancement and entrepreneurial development.

In order to explain the concept of entrepreneurship development, Ifeanacho and Ifeanacho (2014) cited Adegun and Akomolafe (2013) as a gradual growth of innovative, economic and social business enterprise. They went further to state that entrepreneurship development involves the setting up an individual to explore opportunities successfully through making a profitable or suffering loss of invested capital. Therefore, entrepreneurship is seen as a field of study that deals with the organization of knowledge in a particular subject in such a way that it commands more of the hidden potential in the subject in the area of self-employment and job creation (Kalu, 2014). Conversely, entrepreneurship is a veritable engine for the economic development of a country, a way of creating new jobs and national wealth (Nwoye 2011, Belz, & Binder2015).

According to Akinwumi (2012) entrepreneurship is a form of education commonly recognized by every society as a job provider for the jobless and drop out of individuals from our institution in Nigeria. Osemeke (2012) sees entrepreneurship as the act of using individual initiative to transform a business concept into a new venture or to grow and diversify an existing venture. Ndumanya (2012) defined entrepreneurship as the totality of self – asserting attributes that enable a personal to identify latent business opportunities, together with capacity to organize needed resources with which to profitably take advantage of such opportunities in the face of calculated risks and uncertainty. In the view of Nwachukwu and Nwamuo, (2010) entrepreneurship involves the acquisition of skills, ideas and managerial abilities necessary for self-reliance. Nicolaou and Shane (2010) and Ndumanya (2012) views entrepreneurship as the engine driving the economy of nations,

creating new industries, young entrepreneurs, employments and wealth creation in the society. This is why George and Archobong (2010) noted that in any country, entrepreneurship development is very vital for reduction of unemployment rate and improvement of technological advancement. It is therefore necessary to note that, Nigeria today needs educated and skilled workers in order to overcome the problem of unemployment and improve her nation. Hence, industrial technology education and entrepreneurship development could be of great help because it enhances skill acquisition, productivity and sustains competitiveness in the global economy. It is therefore imperative for the study to look at the strategic approach to surmount the present economic recession in Nigeria through vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement.

Statement of the Problem

Entrepreneurship can be currently regarded as part of a strategy to boost the economy. It can be undertake as a challenging task, either internally within organizations, either externally, by the creation of new businesses that are sustainable in a market and in a complex economic environment (Odia & Odia, 2013). Despite the fact that entrepreneurship training is supposed to promote the development of personal qualities such as creativity, risk-taking and responsibility and provide the technical and business skills that are needed in order to start a new business venture (Schaltegger & Wagner, 2011). If Nigerian government wants to be a major player in the global market place of ideas and prepare her citizens for the new environment of today and the future, the country should embrace vocational skill for entrepreneurship development and advance in technology. This will help her citizenry to be creative, innovative develop feasible business plans and set up new business ventures (Uzoka & Bayode 2010).It is therefore, the concern of this study to look at the strategic approach to surmount the present economic recession in Nigeria through vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement, hence, the problem of this study.

Research Question

One research question guided the study:

To what extent do vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement as a strategic approach to surmount economic recession in Nigeria?

Hypothesis

Also, one null hypothesis was tested at 0.05 level of significance:

There is no significant difference in the mean responses of respondents on the extent to which vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement as a strategic approach to surmount economic recession in Nigeria.

Materials and Methods

The study adopted descriptive survey design which made use of questionnaire to obtain data from the respondents. The study is carried out in tertiary institutions offering TVET programmes in Rivers State with a population of one thousand nine hundred and four (1,904). A sample of two hundred and twenty five (225) out of which two hundred (200) and twenty five (25) were students and lecturers respectively. The instrument used for the collection of data was a structured seventeen (17) items questionnaire tagged 'Vocational Skills Acquisition in Industrial Technology Education for Entrepreneurship Development and

Technological Advancement: A Strategic Approach to Surmount Economic Recession in Nigeria (VSAITEPEDTAASASERN)' based on a 5-point rating scale of Very High Extent (VHE) =5, High Extent (HE) =4, Moderate Extent (ME) = 3, Low Extent (LE) = 2, and Very Low Extent (VLE) = 1 was personally administered by the researchers. All were personally administered by the researchers which was properly completed and retrieved on the spot. The instrument 'VSAITEPEDTAASASERN' was validated by two experts. The reliability of the instrument was ascertained using the Pearson Product Moment coefficient correlation formula on the data collected through a pilot test on 28 respondents selected from tertiary institutions in Rivers State who were not part of the sample of the study and reliability of 0.91 was obtained. This was believed to be high enough for the instrument to be used for the main study. Mean and standard deviation were used to answer the research question. In answering the research question, an item with a calculated mean value equal or greater than 3.00 (3.00 – 5.00) was regarded as accepted, while the calculated mean of an item less than or equal to 3.99 (0 – 3.99) was regarded as not accepted. An inferential statistics of z-test was used to test the only null hypothesis at 0.05 level of confidence. It was decided that where z-calculated value was equal or greater then table z-value, it indicates significance difference, so reject the null hypothesis but otherwise, accept the null hypothesis.

Results

The results of the analysis of the study are presented in Tables 1 and 2 according to the research questions and hypothesis.

Table 1: Respondents' Mean Score and Standard Deviation on the extent to which vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement as a strategic approach to surmount economic recession in Nigeria

S/N	ITEMS	Mean Students	Lecturers	Avg.	Sd.	Dec.
1.	Auto-mechanic maintenance and repair skills	3.25	3.33	3.29	0.85	A
2.	Panel beating Skill	3.08	3.00	3.04	1.27	A
3.	Carpentry and joinery skill	3.12	3.07	3.10	1.24	A
4.	Furniture making Skill	3.40	2.93	3.17	1.11	A
5.	Plumbing and pipe fitting Skill	3.14	3.13	3.14	1.20	A
6.	Block laying and concreting skill	3.20	3.11	3.16	1.15	A
7.	Electrical Installations Skill	3.13	3.24	3.19	0.89	A
8.	Radio and television repair skill	3.25	3.48	3.37	0.80	A
9.	Computer programming skill	3.35	3.01	3.18	1.00	A
10.	GSM Maintenance Skills	3.22	3.01	3.12	1.22	A
11.	Welding and fabrication Skill	3.10	3.09	3.10	1.24	A
12.	Forging and casting skill	3.08	3.12	3.10	1.24	A
13.	Plumbing Skill	3.20	3.00	3.10	1.24	A
14.	Aluminum Works Skill	3.92	3.15	3.54	0.78	A
15.	Machining Skill	3.20	3.17	3.19	0.89	A
16.	Photography/Video Skill	2.25	2.54	2.40	1.30	NA
17.	Interlocking Spurs Skill	3.25	3.09	3.17	1.11	A
Average		**3.14**	**3.11**	**3.19**	**0.39**	**A**

KEY: *Av. = Average mean of Students and Teachers, Sd. = Standard Deviation, Dec. = Decision, Acc = Accepted, NA = Not Accepted*

Table 1 revealed that all the items investigated above were all accepted. This signifies that, the respondents (Students and Lecturers) accepted that vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement is a strategic approach to surmount economic recession in Nigeria as their average mean is 3.19 which falls within the range of accepted decision rule (3.00 – 5.00).

Table 2: z-test of respondents' on the extent to which vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement as a strategic approach to surmount economic recession in Nigeria

Respondent	N	$\bar{X}$	SD	z-cal	z-crit	P	Df	Remarks
Students	200	3.56	0.92					
				0.25	±1.96	0.05	248	NS
Lecturers	50	3.06	1.18					

KEY: *NS= Not Significant*

From Table 2, since the calculated value of z-test (0.25) was less than the critical value of z-test (±1.96); the null hypothesis was accepted indicating that there is no significant difference in the perception of respondents on the extent to which vocational skills acquisition in industrial technology education for entrepreneurship development and technological advancement is a strategic approach to surmount economic recession in Nigeria.

Discussion

The study revealed that skill acquisition in industrial technology education involves the mastery of practical skills and knowledge in any vocational and technical field of study. This finding is in agreement with the study of Okorieocha and Taneh (2013) who noted that industrial technology education is the education that provides the skills, knowledge and attitude that lead to the production of individual who are resourceful and productive.

The study also revealed that one to become independent, self-reliant and job creators through exposure to vocational skills acquisition and entrepreneurship development which can assist one survive and create wealth in their environment. This finding corroborates the study of Schaltegger and Wagner, (2011) who submitted that entrepreneurship training is supposed to promote the development of personal qualities such as creativity, risk-taking and responsibility and provide the technical and business skills that are needed in order to start a new business venture.

Conclusion and Recommendations

The study revealed that vocational skills acquisition for entrepreneurship development and technological advancement in industrial technology education is a strategic approach to surmount economic recession in Nigeria. Therefore, a resourceful and productive personnel quality in industrial technology education could be seen as a meeting point of entrepreneurship development and vocational skill acquisition in this era of joblessness, unemployment and eradication of poverty in our society and bringing about technological advancement thereby surmounting the present economic recession in Nigeria. The paper therefore recommends the followings among others:

1. Government should set-up a joint curricula of entrepreneurial, technical vocational education and training to x-ray the possibilities of mismatching skills knowledge and initiatives or the acquisition of skills for self-reliant and job creation.

2. Government should set-up entrepreneurial, technical and vocational training centres to produce the required skilled personnel to cater for the local demands of skilled personnel in Nigeria.
3. Entrepreneurial centres in our institutions in Nigeria must be equipped and utilized to assist universities and other institutions to bridge the gap created by the theoretical nature of our entrepreneurial, technical vocational education and training programme in our institution.

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