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Entrepreneurship Education and Curriculum Issues in Vocational and Technical Education in Nigeria: A Step to National Economic Transformation.

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Abstract

This paper is concerned with entrepreneurship education and curriculum issues in vocational and technical education in Nigeria. Vocational and technical education is a comprehensive action based education programme concerned with technical means of developing basic skills to achieve economic stability of individuals and a nation by training and imparting the necessary skills that lead to the production of craftsmen, technicians, and other skills personnel trained to be enterprising and self-reliant. Entrepreneurship education is an economic developing strategy. The study used survey research design and the instrument was questionnaire. A total of 40 technical teachers were used for the study, selected through random sampling technique. The findings of the study revealed that the entrepreneurship competencies are required along with vocational and technical competencies of graduates to facilitate the economic transformation of the nation. It was recommended among others that curriculum planners should integrate entrepreneurship skills acquisition into the curriculum of vocational and technical education as a step for curbing unemployment and abject poverty.

Innovations in technologies have introduced changes in educational practices, in order to align with the global voyage towards achieving transformation agenda. The federal government has adopted several reforms initiatives among which are the adaptation of entrepreneurship education and the emphasis on vocational and technical education at certain levels. Globalization of the economy, increasing international competitions, changes in demographic development and in the labour market are giving rise to the need for new innovations in education. In order to make life more abundant for people and to get them out of the clutches of the industrialization world, there is need for inclusion of entrepreneurship skills in vocation and technical education curriculum. The changes in technology and economic issues have dramatically changed the way we live, learn, work, and even think about work.

It has created new opportunities as well as new challenges and uncertainties, hence, the issue of inclusion of entrepreneurial skills and the reformation of vocational and technical education curriculum, so as to meet a rapid changing world. Nwokolo (2012) defined entrepreneurship as having ability to find and evaluate business opportunities, gather the necessary resources, initiate appropriate actions to ensure success, and unemployment actions to take advantage of the opportunities for rewarding outcome. Entrepreneurship education is that aspect of education specifically designed to prepare the individual for the world of work in specific areas and to develop a level of maturity to be self-employed, to manage resources and create more wealth (Obasi, 2010). Entrepreneurship education is defined as conscious efforts geared towards the education and development of entrepreneurial knowledge, skills and ability essential in the management of an economic venture (Nwokolo, 2012). Entrepreneurship education provides students with the knowledge, skills, ability and motivation that encourage entrepreneurial success in a variety of settings. It is the process of creating something new with value by devoting the necessary time and effort, and at the same time, assuming the accompanying financial, psychological and social risks. To make entrepreneurship education versatile and robust, vocational and technical education has to be integrated into the programme.

Nwobasi, (2008) defined vocational education as a “training and retraining” which is given in schools or classes under public supervision and control and is conducted as part of a programme designed to prepare individuals for gainful employment as semi-skilled or skilled workers, technicians or sub-professionals in recognized occupation and in a new and emerging occupation, or to prepare individuals for enrolment in advance technical education programmes. Nwokolo (2010), defined technical education as a functional form of education, training or retraining designed to prepare individuals to enter, or continue in paid employment in any recognized occupation and in new and emerging occupations, or a part of total experiences of a person whereby he/she learns successfully to carry on a gainful occupation or

employment. National policy on Education (2004) defined vocational and technical education as those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. It is education for work. Any education which has to do with the development of skills, attitudes, and knowledge necessary for self-reliance or gainful employment is vocational and technical education.

The goals/objectives of vocational education as noted in National policy on Education (2004) include:

1. To provide trained manpower in applied science, technology and commerce
2. To provide technical knowledge and vocational skills necessary for agriculture, industry, commercial and economic development.
3. To provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man.
4. To give an introductory professional studies in engineering and other technologies.
5. To enable the youth have intelligent understanding of the increased complexity of technology.

This implies that the students should acquire the necessary entrepreneurial competencies in vocational technical education before graduation. One of the basic aims of curriculum is improving the quality of vocational and technical education in Nigeria, to facilitate the national transformation agenda, through the integration of theory and practical aspects of entrepreneurship skills by offering student-based, activity-oriented curriculum. Curriculum process is a deliberate, rational and logical way of identifying and structuring different curriculum elements, determining their relevance and interaction. It also means analyzing alternatives and projecting possibilities of the elements throughout a period with available resources. Ndukwe (2011), defined curriculum as that series of things which children and youth must do and experience by way of developing abilities to do things well that make up the adult life; and to be in all respects what adults should be” Curriculum is an embodiment of all the knowledge, skills and attitudes which a nation, through her schools, imparts to her citizens. It involves the acquisition of skills, interest, feelings, needed to perform tasks. The viability of any educational system is gauged by the relevance of her curriculum and relevant curriculum endows its learners with appropriate knowledge, skills and attitudes which enable them to harness resources (material and human) in order to improve the quality of life and the environment.

The inclusion of and use of entrepreneurial skills in vocational and technical education curriculum is one of the major strategies for achieving quality education for

national transformation. The curriculum did not make provision for entrepreneurship courses with the exception of vocational and technical courses, and it is accepted that innovation of some kinds should be inculcated in the curriculum. Since we live in a changing society in which new knowledge is constantly being discovered and old knowledge is being proved wrong. Entrepreneurial development means training the trainees to equip them with the necessary skills, knowledge, ability, characteristics, interest and the motivation to be effective entrepreneurs. Therefore, there is need to invest heavily in the two related programmes (vocational and technical education and entrepreneurship education) since their importance in the economic and social transformation of this country cannot be over-stated.

Statement of the Problem

The integration of vocational/technical and entrepreneurship education, (partnership) principally aims at mobilizing collective efforts so as to improve the efficiency of the system and its contribution to the economic and social goals which are assigned to them. The problems facing Nigerian citizens today range from high level of poverty, unemployment, national over dependency on foreign goods and technology, low economic growth and development among others. The integration of entrepreneurship education and vocational and technical education for poverty reduction, could facilitate the realization of Nigerian's transformation agenda. This situation calls for an active decision for the inclusion of entrepreneurship education into vocational and technical education curriculum and also to bridge the gap between policy statements and implementation since the importance of the two programmes in national transformation cannot be over-emphasized. There is, therefore, the need to re-stategize through proper planning of the education system especially in the area of curriculum planning, development and implementation by adopting the principle of positive discrimination in favour of vocational/technical education and entrepreneurship education.

Purpose of the Study

Having gone this far and highlighted the benefits of integrating entrepreneurship education into the vocational and technical education curriculum, it is worth while to ascertain how far the objectives could be achieved.

That is the relevance of entrepreneurship and vocational and technical education in the realization of the national transformation agenda. Specifically, the study sought to:

1. Identify entrepreneurship competencies required of graduates that will facilitate the transformation exercise.
2. Identify vocational and technical education competencies required of graduates that will facilitate the transformation agenda in Nigeria.

3. Find out the level of facilities available for teaching/learning vocational/technical education and entrepreneurship education programmes.
4. Find out the constraints to the effective acquisition of skills through VTE and entrepreneurship education.

Research Questions

1. What are the entrepreneurship competencies required of graduates that will facilitate the transformation exercise in the country?
2. What are the vocational and technical competencies required of graduates that will facilitate the transformation agenda?
3. What is the level of facilities available for the teaching and learning of vocational/technical education and entrepreneurship education?
4. What are the constraints to the effective acquisition of required skills through vocational/technical education and entrepreneurship education?

Methodology

The research design adopted for this study is survey research method. The choice of this design was informed by the fact that the purpose was to seek information from the respondents. The study was carried out in Benue State. The population for the study consisted of all the 45 mechanical technology teachers and 110 third year students from three Technical Colleges in Benue State. The total population was 155, and the entire population was studied.

A 40-item instrument tagged: questionnaire on entrepreneurship education and curriculum issues in vocational and technical education (E.C.I.V.T.E), developed by the researcher was used for data collection. Four research questions were answered in the study using mean (X) and standard deviation (SD). The items in research questions one and two of the questionnaire were structured on four-point scale using response options of very much required (VMR)4, much required (MR)3, required (R)2, while not required (NR) represents 1. Research question 3 was constructed on four-point scale using response options of highly available (HA)4, Averagely available (AA)3, low availability (LA)2, not available (NA)1, and research question 4 was analyzed using mean (X) and standard deviation (SD) with four-point scale of Strongly Agree (SA)4, Agree (A)3, Disagree (D)2, and Strongly Disagree (SD)1. A mean score of 2.50 and above is set as a criterion for positive responses while 2.49 and below was criterion for negative responses in the study.

Validity of the Instrument

To ensure the face validity of the instrument the initial draft of the questionnaire was given out to three experts in vocational and technical education.

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They were requested to study the items and assess the suitability of the language, the adequacy and relevance of the items in addressing the research questions. The reliability of the instrument was established using Cronbach Alpha Formula and a reliability coefficient of 0.80 was obtained.

Copies of the questionnaire were administered on the respondents with the help of two research assistants. The research assistants collected copies of completed questionnaire from the respondents after one week. 153 copies out of 155 copies of the questionnaire items were returned, which indicated ninety-nine percentage return rate. The standard deviation was used to determine the closeness or otherwise of the opinions of the respondents from the group mean.

Results

The results of the study obtained from the research questions answered (tables 1, 2, 3 and 4).

Research Question 1

What are the entrepreneurship competencies required of graduates that will facilitate the national transformation agenda?

Table 1.Means and Standard Deviation of Respondents on Entrepreneurship Competencies Required of Graduates to Facilitate the Achievement of National Transformation Agenda.

S/NO	Item Statements	\bar{X}	SD	Remarks
1.	Ability to plan and organize small scale business.	3.51	0.64	Required
2.	Ability to bear risks	3.66	0.54	Much Required
3.	Ability to draw organizational objective	3.58	0.60	Required
4.	Ability to cope with challenges	3.56	0.72	Required
5.	Leadership skills	3.60	0.82	Much Required
6.	Human relation skills	3.57	0.85	Required
7.	Acquire skills of raising capital	2.49	0.99	Not Required
8.	Acquire business management skills	2.67	0.97	Much Required
9.	Acquire decision making skills	3.67	0.72	Very much required
10.	Ability to plan the new budget/forecasting for a project or new business.	3.65	0.61	Much Required

Table1 showed that 9 out of 10 items in the table had mean range of 3.51 to 3.71. This range was above the minimum required mean of 2.50. Item 7 had the mean value of 2.49 which is below cut off point of 2.50. The items in the table also had

standard deviations range of 0.54 to 0.97, which indicated that the respondents were close together among themselves and not far away from the mean in their opinions.

This implies that all the entrepreneurship competencies, except one, were required of graduates to facilitate the realization of transformation agenda in Nigeria.

Research Question 2

What are the vocational and technical competencies required of graduates for eradication of poverty in the country?

Table 2: Mean Rating of the Respondents on the Vocational and Technical Competencies that Facilitate Eradication of Poverty in the Country

S/NO	Item Statements	\bar{X}	SD	Remarks
1.	Ability to identify materials/resources that will be suitable for accomplishing a project.	3.00	1.15	Required
2.	Skills in process of production, distribution and management.	3.30	1.32	Required
3.	Skills in exploration of tools and materials.	3.50	0.65	Required
4.	Skills in designing and craftsmanship in technical education.	3.24	1.46	Required
5.	Practical skills, such as tool use, repair and maintenance.	3.60	1.04	Much Required
6.	Skills in agricultural production	3.40	1.60	Required
7.	Skills in fabrication and machining	2.90	1.00	Required
8.	Ability to focus on customer's need before developing a product.	2.02	0.46	Not Required
9.	Skills in business education	3.80	1.36	Very much required
10.	Skills in carpentry and joinery	3.65	1.02	Much Required

The analysis in table2 showed the mean (\bar{X}) and standard deviation of the respondents. The table showed that item 9 had the highest mean of 3.80 and was rated very much required. Two items out of 10 in the table had mean scores of 3.65 and 3.60, which are regarded as much required. Seven items out of 10 in the table had their

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mean range of 2.90 to 3.50. Only item 8 had the mean score of 2.02 which was regarded as not required. The items in the table also had standard deviation range of 0.46 to 1.60, which was an indication that the respondents were close together among themselves and not far away from the mean in their opinion.

Research Question3

What is the level of facilities available for the teaching and learning of vocational/technical and entrepreneurship education?

Table 3: Mean and Standard Deviation of Respondents on the Level of Facilities Available for the Teaching and Learning of Vocational/Technical and Entrepreneurship Education.

S/NO	Item Statements	X	SD	Remarks
1.	Classroom	3.50	0.86	Highly Available
2.	Departmental library	3.58	0.88	Highly Available
3.	Recommended tools and equipment for teaching and learning	3.00	0.91	Averagely Available
4.	Material (consumable and non-consumable)	2.58	0.54	Low Availability
5.	Toilet facilities	3.32	0.81	Averagely Available
6.	Machines in good condition	3.60	0.86	Highly Available
7.	Drawing studios	3.01	0.84	Averagely Available
8.	Guidance and counseling units	2.88	0.63	Low Availability
9.	ICT tools and facilities that can be employed in the teaching and learning	2.90	0.60	Low Availability
10.	Work benches and laboratories	2.30	0.44	Low Availability

The data presented in table3 revealed that 3 out of 10 items had their mean scores range of 3.50, 3.58 and 3.60, indicating that item1, 2 and 6 were highly available and 3 others (3, 5 and 7) had their mean scores range of 3.00 to 3.32 indicating that they were averagely available, while 4 out of 10 items had their score values below 3.00

indicating that they were low in availability. Generally, available facilities for the teaching of vocational technical and entrepreneurship education were low.

Research Question 4

What are the constraints to effective acquisition of required skills through vocational/technical and entrepreneurship education?

Table 4: Mean and Standard Deviation of Respondents on the Constraints to Effective Acquisition of Required Skills

S/NO	Item Statements	\bar{X}	SD	Remarks
1.	Inappropriate curriculum content	3.86	0.54	Strongly Agree
2.	Unqualified resource person/teachers	3.79	0.41	Strongly Agree
3.	Inappropriate teaching/learning strategies, methods and approaches	3.84	0.55	Strongly Agree
4.	Non use of instructional resources/materials in teaching	3.59	0.48	Agree
5.	Inadequate funding	3.70	0.41	Strongly Agree
6.	Inadequate classrooms	3.80	0.40	Strongly Agree
7.	Poor remuneration of teachers	3.62	0.56	Agree
8.	Lack of entrepreneurship courses in vocational and technical education	3.87	0.35	Strongly Agree
9.	Inconsistent electric power supply	3.58	0.42	Agree
10.	Lack of awareness on the importance of vocational and technical education and entrepreneurship education on the society	3.69	0.45	Agree

The data presented in table 4 revealed that all the constraints to effective acquisition of the required skills through vocational/technical education and entrepreneurship education were agreed to be the constraints. All the items (1-10) had their mean scores range of 3.58 to 3.87 which were above cut off point of 2.50. This is supported by facts that the respondents did not differ much in their opinions as the standard deviation ranged between 0.35 to 0.56.

Discussion

The findings of the study revealed that the entrepreneurship competencies, (ability to organize small scale business, risks bearing capacity, coping with challenges, leadership skills, among others) were among the skills required by the graduates from the vocational and technical education which will facilitate economic transformation agenda in Nigeria. This findings were in conformity with findings of Kilby (1971) cited in ESU (2011) who in a study: Entrepreneurship and economic development found out that the array of possible entrepreneurship skills encompasses the perception of economic opportunity, technical and organizational innovations, gaining commands over scarce resources, taking responsibilities for internal management and for external advancement of the firm in all aspects of the teaching enterprise. The findings were also inline with the findings of Egbe (2008), in a study on Entrepreneurship skills required for sustainable layer production in Ebonyi State, who stated that layer producers required entrepreneurship skills in developing the objectives, planning for sources of inputs, identifying markets for the products and choosing systems and location for the enterprise.

The findings of this study on the vocational technical competencies required of graduates for eradication of poverty in Nigeria were in consonance with the findings of Ede, Miller and Bakave (2010) in a study on work skill improvement needs of graduates of technical colleges in machine shop practice for demand driven employment in South West Zone of contemporary Nigeria, who found out that technical colleges' graduates required practical skills in lathe, milling, drilling and grinding operations. In the same vein, Nwokolo (2010), who in a study: Training skills relevant for employment in metal work industries: The way forward, observed that training skills required of graduates of metal work technology include exploration of materials, tools and techniques, production, distribution and management skills; skills in designing; skills in internet and computer access and skills in fabrication.

Data in table3 revealed the facilities that are not available and the low availability of some of the facilities like classroom buildings, materials (consumable and non-consumable), guidance and counseling units, ICT tools and facilities, workbenches and laboratories. These findings were in agreement with the findings of Iheji, Eze and Olaitan (2010), on quality assurance of inputs into the implementation of agricultural education programme of colleges of education in South Eastern Nigeria who discovered that availability, adequacy and suitability of material inputs were very low. The author further observed that products of agricultural education have been viewed to be incompetent in imparting knowledge, skills and attitudes to students and helping them to develop skills through practicals.

It was found from this study that the respondents agreed on all the items identified as constraints to effective acquisition of required skills through vocational/technical and entrepreneurship education. This finding was confirmed by Ukonze and Olaitan (2010) who stated that many factors are contributing to that which the society is looking at as where they were trained, due to inadequate facilities, inadequate laboratory for teaching practicals to those students and teachers' incompetence. There are some limitations that affect the teaching and learning of vocational technical and entrepreneurship education. Such limitations are inappropriate curriculum content, unqualified resource persons/teachers, lack of entrepreneurship education courses in vocational and technical education curriculum, among others. Successful acquisition of entrepreneurship education can only be assured through the integration of the two programmes with the adequate provision of resources (manpower, money and material resources).

Conclusion

Based on the findings of the study, all the identified competencies in entrepreneurship education and vocational/technical education are very much required of the students before graduation, which will in no small measure facilitate in their economic development and the society as a whole. Adequate provision of facilities in good conditions for teaching and learning of the two programmes will facilitate acquisition of these competencies for individual and national economic development. The above stated points could be achieved by integrating entrepreneurship education into vocational and technical education curriculum, and a curriculum devoid of entrepreneurship skills education at all levels of education, especially at the tertiary level will merely prepare and produce job seeking graduates for negative opportunities.

Recommendations

The following recommendations were made based on the finding of this study:-

Curriculum planners should integrate entrepreneurship skills acquisition into the curriculum of vocational and technical education as a step in curbing unemployment and abject poverty. The essence of integrating entrepreneurship education into vocational and technical education is to ensure that graduates are better equipped with the potentials to establish private business ventures for their self-reliance and for creating jobs for others.

Seminars, workshops, conferences and sensitization campaigns should be organized by government to expose the need to empower people on entrepreneurship, vocational and technical skills or competencies for wealth creation and self employment. The appropriate authorities for educational funding should provide enough funds for the procurement of necessary technological facilities and resources

for entrepreneurship education which will promote personal competencies and national development.

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