TECHNICAL SKILLS REQUIRED BY BLOCKLAYING AND CONCRETING TRAINEES OF TECHNICAL COLLEGES FOR ENTREPRENUERSHIP IN BUILDING CONSTRUCTION INDUSTRIES IN NIGERIA.

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ABSTRACT

The study explored the technical skills required by Technical and Vocational Education Trainees (TVET) in the building construction industries for entrepreneurship development in Nigeria as a solution to unemployment and economic recession. The population of the study consisted of technical colleges trainees and roadside trainees in Rivers State. A total of four hundred fourteen (414) that is two hundred and seven (207) technical colleges' trainees and two hundred and seven (207) roadside trainees in Rivers State was the sample of the study selected through stratified sampling technique. One research question and one hypothesis were postulated for this study, Technical Skills Needed by Building Construction Technical Trainees of Technical Colleges for Entrepreneurship Development. (TSNBCTTCED) was the instrument used for data collection. It was validated by three experts and reliability coefficient of 0.74 obtained. The questionnaire consisted of ten (10) items; data collected were analyzed using mean and standard deviation to answer the research question while t-test was used to test the null hypothesis at 5% level of significance. The study revealed rejection of the null hypothesis that says that there is no significant difference in the mean response of graduates of technical college and roadside trainees in the building construction industries on the technical skills required by block laying and concreting craftsmen for job placement in Rivers State. It therefore was recommended that entrepreneurship education should be introduced in the scheme of work as a course in technical colleges and should also be implemented; and government should provide the initial capital for all intending block laying and concreting graduates that have the desire for entrepreneurship among others.

Keywords: Skills, Training, Entrepreneurship and Economic Recession

INTRODUCTION

Technical Vocational Education and Training (TVET) plays a vital role in improving the wellbeing of graduates in Nigeria. TVET in Nigeria enhances Skill training, productivity and sustains competitiveness in the global economy (Chinwe, 2008). The Federal Republic of Nigeria (FRN, 2004) in its national policy on education defined TVET as the aspect of education which leads to acquisition of practical and applied skills as well as basic scientific knowledge. It is also a subject that deals with the fundamentals of engineering and technology and its components include: Woodwork, Metalwork, Electrical/Electronics, Computer, Mechanics, Technical Drawing, Building Construction among others. Hence. blocklaying and concreting is one of the approved courses to be taken under building construction trade as enshrined in the National Policy on Education of the Federal Government of Nigeria. It entails acquiring theoretical and practical skills in all that is

involved in the act of blocklaying and concreting after which the beneficiary is certified to participate effectively in the field of work. It is also supposed to prepare one as a responsible citizen, to develop and promote a sound and sustainable environment and above all alleviate poverty.

The Federal Government tried projecting the course by introducing it under Introductory Technology in junior secondary schools. Governmental and non-governmental agencies have also made several efforts to ensure that people who graduate from this course are self reliant through trainings and re-training of teachers, provision of requisite infrastructure and many others. Teenar (2016) reported that there was a meeting with the Rivers State Commissioner for Education, and Minister Counselor of the Embassy of the Federal Republic of Germany for the reopening of the Port Harcourt Technical and Vocational Training Center. All these are to foster the acquisition of effective skill, as to alleviate poverty and improve the economy. Thus, TVET is a program that is designed to equip the industries with the technological manpower needed to foster its socio-economic, and technical functionality. More so, Afaor, Agishi and Ajula (2013) noted that the current trend in TVET places much emphasis on entrepreneurship education to promote creativity, innovation, self-employment and poverty alleviation strategies that will cushion the scorching effects of unemployment by providing unlimited job-creation avenues to a multitude of Nigeria's teeming graduates.

Entrepreneurship education prepares people to be responsible and enterprising, it helps them develop skills, knowledge and attitudes necessary to achieve the goals they set out for themselves and the society; this entails the designing, launching and running of a new business, which starts as a small business, such as a start-up company offering a product, process or service for sale or hire. Acquiring entrepreneurial education/skill makes room for a more quality education; evidence also shows that people with entrepreneurial education are more employable (Anyamene, Anyachebelu, Nwokolo, and Izuchi, 2009). According to Henry (2003), entrepreneurship is the engine driving the economy of nations, creating new industries, young entrepreneurs, employments and wealth creation in the society. Therefore, entrepreneurship involves a process directed towards creating wealth for developmental purposes and eradication of unemployment for the nations. Nevertheless, entrepreneurship involves employment generation and wealth creation for human sustainability. Consequently, the development of entrepreneurial skills is critical to create a culture where entrepreneurship is something natural becoming an integral part of our evolution and a new model of economy. Hence, technical skills needed by trainees of technical vocational education and training (TVET) in the building construction industries for entrepreneurship development in Nigeria should be a solution to unemployment and economic recession.

STATEMENT OF THE PROBLEM

Blocklaying and concreting is expected to equip beneficiaries with skills to enable them be self reliant, gainfully employed or employers of labour, as to alleviate poverty and launch the society into wealth and peaceful coexistence. Critical observation has revealed that the school curriculum by the Federal Government of Nigeria in the National Policy on Education and the National Board for Technical Education is deficient in courses identified by the society to make their citizens functional towards the acquisition of wealth. That is, entrepreneurial education. The entrepreneurial skills are meant to launch craftsmen of blocklaying and concreting skill and the society into wealth by equipping these craftsmen with skills that will enable them sell their products and render services to make profit and earn a living. This gap in the curriculum seem to be the major reason why craftsmen of blocklaying and concreting graduate seek for unavailable white collar job, instead of being self employed or employers

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of labour. This state of joblessness have created a lot of problem for the society, ranging from youth restiveness, vandalisation of developmental projects, over-dependence on the society for better livelihood and finally landing the society into poverty and recession. This study therefore wishes to investigate the technical skills needed for entrepreneurship of blocklaying and concreting craftsmen in Rivers State for Job Placement.

RESEARCH QUESTION

1. What are the technical skills required by TVET trainees in the building construction industries for entrepreneurship development in Nigeria?

HYPOTHESIS

1. There is no significant difference in the mean response of respondents on the technical skills required by TVET trainees in the building construction industries for entrepreneurship development in Nigeria.

METHODOLOGY

The study adopted the descriptive survey research design which enhanced the collection of data from a sample of technical colleges trainees and roadside trainees in Rivers State: A sample of sample of four hundred fourteen (414) sets of structured questionnaires with ten (10) items were administered to two hundred and seven (207) technical colleges trainees and two hundred and seven (207) roadside trainees in Rivers State.

The instrument used for the collection of data was a structured questionnaire tagged 'Technical Skills Needed by Building Construction Technical Trainees of Technical Colleges for Entrepreneurship Development. (TSNBCTTCED)' with 10 items on a 4-point scale of Very highly needed (VHN) = 4, Highly Needed (HN) = 3, Very Lowly Needed (VLN) = 2 and Not Needed (NN) = 1. The instrument 'TSNBCTTCED' was validated by three experts. The reliability of the instrument was ascertained using the Cronbach Alpha Reliability on the data collected through a pilot test on 25 respondents selected from technical colleges within the state who were not part of the sample of the study. The coefficient of reliability obtained was 0.74. This was adjudged high enough for the instrument to be used for the main study.

The researcher personally went to the schools and companies to administer the 100 copies of the questionnaire. All were properly completed and retrieved on the spot. The descriptive statistics of mean was used to answer the research question. An item with a calculated mean value equal or greater than 2.50 (2.50 – 4.00) was regarded as agreed, while the calculated mean of an item less than or equal to 2.49 (0 - 2.49) was regarded as disagreed. 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.

Table 1. *Respondents' Mean Score and Standard Deviation on the technical skills required by TVET trainees in the building construction industries for entrepreneurship development in Nigeria*

S. No.	Technical Skills needed	Technical College Graduate			Roadside trainees		
		$\overline{X}$	S.D.	Remark	$\overline{X}$	S.D.	Remark
1	Reading of blue print and setting out building	3.66	0.73	Needed	2.03	0.43	Not needed
2	Identification and proper usage of tools and equipment.	3.58	0.79	Needed	2.58	0.61	Needed
3	Safety rules and tool management	3.57	0.74	Needed	2.17	0.42	Not needed
4	Proportioning and mixing of mortar manually	2.32	0.63	Not Needed	2.67	0.54	Needed
5	Manufacture and curing of block manually	2.43	0.48	Not Needed	3.04	0.88	Needed
6	Laying of foundation in stretcher bond up to lintel level.	3.54	0.75	Needed	2.03	0.63	Not needed
7	Cavity wall construction	3.64	0.74	Needed	1.08	0.57	Not needed
8	Construction of semi-circular arch	3.59	0.79	Needed	2.43	0.46	Not needed
9	Rendering of walls	3.47	0.97	Needed	2.11	0.73	Not needed
10	Wall and floor tiling using PVC	3.53	0.83	Needed	2.51	0.88	Needed
	Grand Mean	3.53	0.82	Needed	2.27	0.62	Not needed

Data in table 1 above revealed what technical skills are needed by prospective blocklaying and concreting craftsman for job placement in the construction firms in Rivers State. As can be seen from the table above, the respondents that make up the technical graduates had mean responses greater than '2.50' to all the ten (10) items of technical skills needed for job placement except for items four (4) and five (5) where the computed means were 2.32 and 2.43 respectively for items four (4) and five(5). This implies that except for items 4 and 5, all other technical skills are needed by technical college graduates for job placement in the construction firms in Rivers State. It is not surprising that finding is in agreement with Teenar (2016) in a communiqué on the reopening of Port-Harcourt Technical and Vocational Training Centre. Teenar revealed in his communiqué that proportioning and mixing of mortar manually as well as manufacture and curing of block manually are not needed in most construction firms who have specialized machinery for doing this. Rather, prospective applicants, who may have passed the competency skills tests are given further training on the use of these specialized machines for proportioning and mixing mortar as well as manufacture and curing of cement and concrete blocks. The grand mean of 3.53 means that overall; all the technical skills listed in the 10 items in table 2 above are needed by technical college graduates for job placement.

Juxtaposing this with findings from those of the roadside trainees, table 1 above revealed that construction firms require these set of applicants to be able to manually proportion and mix mortar as well as proficiency in manufacture and curing of blocks manually. Furthermore, it can be seen that items 2 and 10 which are identification and proper usage of tools and equipment and wall and floor tiling using PVC respectively are also needed by roadside

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trainees for job placement. The rest of the items scored less than 2.50 implying that they are not needed. The grand mean of 2.27 imply that overall, all the technical skills listed in items 1-10 are not important for job placement of roadside trainees. This is placed in more perspective by Odu, (2012) in a study of technical and managerial skill needs of blocklaying and concreting graduates for effective entrepreneurship in Nigeria. In the Asian Journal of Management Sciences and Education, Odu observed that while technical college trained graduates are in high demand in construction firms mainly in supervisory and machinery operations capacity, roadside trainees are still needed as artisans and by their job descriptions, may not really need to undergo arduous proficiency testing before job placement when compared with the proficiency testing processes the technical college graduates have to go through for job placement. This means that while the needs for these technical skills may not be in doubt for roadside trainees, they are however, not requested to prove their proficiency in these skills going by the nature of job specifications these set of trainees do in construction firms.

Table 2. *t-test for mean response of respondents on the technical skills required by TVET trainees in the building construction industries for entrepreneurship development in Nigeria*

S/N	Respondents	N	Mean ($\bar{X}$)	S.D	Df	t-cal	2(tail)Sig	Decision
1	Technical College Graduates	207	3.53	0.82	205	-3.67	0.000	S
2	Roadside trainees	207	2.27	0.62				

Key: S = Significant

As shown in table 2 above, overall mean responses from technical college graduates and roadside trainees were 3.53 and 2.27 respectively. From the table, value shows there is significant difference between the mean responses of technical college graduates and roadside trainees. This is because the 2-tail significance level (0.000) calculated is lower than the significance level (0.05) set for the hypothesis. We therefore reject the null hypothesis that says that there is no significant difference in the mean response of graduates of technical college and roadside trainees in the building construction industries on the technical skills needed by blocklaying and concreting craftsmen for job placement in Rivers State. We therefore conclude that there is significant difference in the mean response of graduates of technical college and roadside trainees in the building construction industries on the technical skills needed by blocklaying and concreting craftsmen for job placement in Rivers State

DISCUSSION OF FINDINGS

The findings of the study relating to research question one revealed that the respondents that make up the technical graduates had mean responses greater than '2.50' to all the ten (10) items of technical skills needed for job placement except for items four (4) and five (5) where the computed means were 2.32 and 2.43 respectively for items four (4) and five (5). This implies that except for items 4 and 5, all other technical skills are needed by technical college graduates for job placement in the construction firms in Rivers State. The hypothesis in sum, revealed that there is significant difference in the mean response of graduates of technical college and roadside trainees in the building construction industries on the technical skills needed by blocklaying and concreting craftsmen for job placement in Rivers State

In line with this finding, Teenar (2016) in a communiqué on the reopening of Port-Harcourt Technical and Vocational Training Centre revealed that proportioning and mixing of mortar manually as well manufacture and curing of block manually are not needed in most construction firms who have specialized machinery for doing this. Rather, prospective

applicants, who may have passed the competency skills tests are given further training on the use of these specialized machines for proportioning and mixing mortar as well as manufacture and curing of cement and concrete blocks. The grand mean of 3.53 means that all the technical skills listed in the 10 items in table 1 above are needed by technical college graduates for job placement. Juxtaposing this with findings from those of the roadside trainees, table 1 above revealed that construction firms require these set of applicants to be able to manually proportion and mix mortar as well as proficiency in manufacture and curing of blocks manually. Furthermore, it can be seen that items 2 and 10 which are identification and proper usage of tools and equipment and wall and floor tiling using PVC respectively are also needed by roadside trainees for job placement. The rest of the items scored less than 2.50 implying that they are not needed. The grand mean of 2.27 imply that overall, all the technical skills listed in items 1-10 are not important for job placement of roadside trainees. This is placed in more perspective by Odu, (2012) in a study of technical and managerial skill needs of block laying and concreting graduates for effective entrepreneurship in Nigeria, in the Asian Journal of Management Sciences and Education where Odu observed that while technical college trained graduates are in high demand in construction firms mainly in supervisory and machinery operations capacity, roadside trainees are still needed as artisans and by their job descriptions, may not really need to undergo arduous proficiency testing before job placement when compared with the proficiency testing processes their technical college graduates have to go through for job placement. This means that while the needs for these technical skills may not be in doubt for roadside trainees, they are however, not requested to prove their proficiency in these skills going by the nature of job specifications these set of trainees do in construction firms.

CONCLUSION

The study examined the technical skills needed for entrepreneurship of blocklaying and concreting craftsmen for job placement in Rivers State. The finding of the study revealed that technical skills are needed to make blocklaying and concreting craftsmen entrepreneurial for job placement. If this is the case, it could then be concluded that prospective blocklaying and concreting craftsmen in Technical Colleges in Rivers State will be better enhanced for job placement if proper attention and adequate resources are geared towards inculcating these technical skills in them as part of their graduation requirement.

RECOMMENDATION

The paper therefore recommends the followings and it's believed that if implemented accordingly will go a long way to improve entrepreneurship and enhance economic development in Nigeria:

1. Technical skills needed to enhance entrepreneurship education should be introduced in the scheme of work as a course in technical colleges and should also be implemented.
2. Government should provide the initial capital for all intending blocklaying and concreting graduates that have the desire for entrepreneurship.
3. Moreover, the entrepreneur education in Nigeria should re-focus the teaching and training of students towards inculcating entrepreneurial skills that can help to be creative, innovative, develop feasible business plans and set up new business ventures.

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