



Best Practices in Technical Vocational Education and Training (TVET) and Students' Skill Acquisition for Sustainable National Development in Nigeria

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Abstract

Technical, Vocational Education and Training (TVET) provides the employable skills, attitudes and creative abilities needed for effective and efficient performance in the world of work. This type of education is a vital tool in the hand of government to curb most of the evil vices in our societies; hence, it provides skills and competences for self employment. However, the best practices in TVET that would have provided the students with adequate skills for sustainable national development in Nigeria are far inadequate. It is based on this premise that this study was conducted to determine the influence of best practices in TVET on sustainable national development. The survey research design was adopted for the study. Three research objectives were formulated for the study, and three null hypotheses were postulated and tested at 0.05 level of significance. One hundred and twenty final year students from Ahmadu Bello University, Zaria and AbubakarTafawaBalewa University, Bauchi, from the Department of Vocational and Technical Education constituted the population for the study. Independent t-test was used to test all the null hypotheses at 0.05 level of significance. The study revealed among others that there is significant difference between equipment available and equipment needed for the teaching/learning of TVET in tertiary institutions for sustainable national development in Nigeria. Based on the findings, the study concluded that the skills acquired by TVET graduates at present may soon become a mis-match with the TVET skills expected in the labour market, and if adequate steps are not taking by the schools management to equip the students laboratories and workshop with modern equipment and the needed environment for teaching and learning, it would amount to producing TVET graduates that may be unemployed, and this will increase more the rate of unemployment that may lead to more evil vices in our societies. In view of this, it was recommended that tertiary institutions offering TVET should upgrade and standardize their teaching workshops and provide the enabling environment for graduates of TVET to acquire up-to-date skills, knowledge and competences needed for the present world of work.

Keywords: TVET, Best practices and National Development

Introduction

Vocational and technical education is fully back on the development agenda of Nigerian government after many years of neglect. Vocational and Technical education was considered to be an education for the handicap, unintelligent, underachievers and dropout from the school. However, in recent years, a fresh awareness of the critical role that



Vocational and Technical education can play in economic growth and national development has dawned on the federal and state governments of Nigeria. The increasing importance that Nigerian governments attach to vocational and technical education is reflected in various strategy papers that the governments have developed with financial institutions.

There are other countries, according to Afeti (2006) that embrace vocational and technical education for economic growth and national development. Cameroon, for example develops vocational and technical education and professional training to facilitate integration into the labour market; Cote d'Ivoire strengthened vocational training, Ghana linked vocational and technical education and training with education of the youth and the development of technical and entrepreneurial skills, Malawi emphasized the need to promote self-employment through skills development.

According to Okoye, Okwelle and Chijioke (2014), Technical education is then a formal training that enables application of the techniques of applied sciences and mathematical principles for the services of humankind; and vocational education is the educational preparations and training provided to individuals to enable them become specifically qualified for a particular vocation. While technical education has bias in nurturing skills and practical development of an individual, vocational education is imbued with strict adherence to guiding principles for effective professional performance in an occupational field. Federal Republic of Nigeria (2004) asserts that TVET is thus the comprehensive term referring to those aspects of the educational processes involving 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.

Therefore, Butterfield (2000) asserts that any education program organized to orient people into skills acquisition, and as well teach them the attitude and knowledge necessary for the appropriate utilization of such skills, is referred to as technical and vocational education. It is education designated to develop specific occupational skills.

According to Auduand Kamin (2013), Vocational and Technical education has important features such as: provision of orientation towards world of works, train the skilled and entrepreneurial workforce that Nigeria needs to create wealth and alleviate poverty, prepare the teeming youth for gainful employment and sustainable livelihood, drive the engine of industrial and economic growth and national development and build entrepreneurial workforce.

Vocational and Technical Education provides practical skills, know-how and understanding necessary for employment in a particular occupation, trade or group of occupations or trades. Ekpeyong (2005) asserts that Vocational and Technical Education is not only about knowing how to do things but also understanding why things are done in a particular way. Aliyu (2009) states that vocational and technical education is offered in primary, secondary and tertiary institutions of learning and it is expected that its best practices should be observed.



A best practice can be defined as a method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark to improve standards of a profession or organization. Best practices are used to maintain quality as an alternative to mandatory legislated standards and can be based on self-assessment or benchmarking. Best practice is a feature of accredited management standards. It is also the result of an organizational service, function, or process which, when applied to a particular setting, achieves the desired outcome and/or meets or exceeds a benchmark for a standard. In a simple way, best practice which is a strategic management terms means a template of standardization of a given profession or organization; It could also be referred to as quality assurance for a given profession or organization.

Therefore, best practices in teaching Vocational and Technical Education and Training, is referred to what the government, professionals and teachers can do to improve or standardize the teaching and learning of vocational and technical education and training, precisely in Nigeria which include the provision of an adequate equipment in students' workshop, physical environment of workshop, physical needs of the students, positive language and behavior in the workshop for students, strategy to motivate the students, exposure of students to the targeted vocation and dynamic and effective use of tools.

Statement of the Problem

Youths between the ages of 18-35 constitute the larger population in Nigeria as asserts by the Nigeria's National youth development policy in 2001. These teeming youths secure admission into tertiary institutions yearly and they graduate yearly too, ready for employment in government establishments. Unfortunately there are no longer vacancies for employment in government establishments. This phenomenon increases the rate of unemployment, poverty and evil vices in the society which slow down the national economic development and growth. This problem prompted the government to begin to rely on TVET in institutions of learning as one of the major tools in her hands to reduce the rate of unemployment, poverty and other evil vices. However, it is observed that most of the institutions that offer TVET do not have equipped students' workshop, do not expose their students to the dynamic use of tools and the environmental condition of the students' workshop which constitute the best practices in TVET are not encouraging. This, therefore, limit TVET to provide its recipients with technical work skills that demand: creativity, problem-solving ability, higher thinking order skills and transferable and adaptable skills for self- gainful engagement to reduce the rate of search for government paid jobs.

It is on this background that this study was conducted to determine the influence of workshop equipment, dynamic use of tools and environmental condition of the students' workshop on students' skills acquisition in TVET in tertiary institutions for sustainable national development in Nigeria.

Objectives of the Study:



The general objective of the study was to determine the influence of Best Practices in Technical Vocational Education and Training (TVET) and Students' Skill Acquisition for sustainable National Development in Nigeria while the specific objectives were to:

1. determine equipment available in workshop and equipment needed for students' skills acquisition for sustainable national development in Nigeria.
2. examine current physical environmental condition of workshop and the needed environmental condition of workshop for students' skills acquisition for sustainable national development in Nigeria.
3. determine current students' exposure to the use of tools and the needed students' exposure to the dynamic and effective use of tool for students' skills acquisition for sustainable national development in Nigeria.

Null Hypotheses:

The following null hypotheses were postulated for the study and tested at 0.05 level of significance.

1. There is no significant difference between the mean responses of TVET students on equipment available in workshop and equipment needed for students' skills acquisition for sustainable national development in Nigeria.
2. There is no significant difference between the mean responses of TVET students on current physical environmental condition of workshop and the needed environmental condition of workshop for students' skills acquisition for sustainable national development in Nigeria.
3. There is significant difference between the mean responses of TVET students on current students' exposure to the use of tools and the needed students' exposure to the dynamic and effective use of tool for students' skills acquisition for sustainable national development in Nigeria.

Methodology

The descriptive research design of the survey type was used for the study. The population for the study was 120. This comprise 60 final year students from ABU, Zaria and 60 final year students from ATBU, Bauchi, all from the Department of Vocational and Technical Education. The population was considered manageable and therefore used as the sample size for the study. This was in line with Anikweze (1995), Alamu and Olukosi(2008) who opine that if the population number is small and manageable, it becomes synonymous with the sample. Thus, neither sample size nor sampling technique was required from the population.

A self designed twenty-four items questionnaire was used to elicit responses from the respondents. Section A, dealt with the demographic data of the respondents while section B, consisted of questionnaire items on equipment, environmental condition of the workshop and student current exposure to dynamic and effective use of tools. On the rating of the



instrument, the researcher used a 4-point rating scale with 4 points for strongly agree (SA), 3 points for agree (A), 2 points for Disagree (D) and 1 point for strongly disagree (SD).

The reliability of the instrument was ensured through split half reliability method and reliability co-efficient of 0.62 was obtained. The questionnaire was personally administered by the researcher and 115 copies of the questionnaire were duly completed and returned. The null hypotheses were tested using t-test at 0.05 level of significance.

Results

The following null hypotheses were tested and result presented in tables 1-4

Null hypothesis 1: there is no significant difference between the equipment available in workshop and equipment needed for students’ competence and skills acquisition in TVET for sustainable national development

Table 1: t -test Analysis on Equipment Available and Needed in Schools’ Workshop

Groups	Mean	SD	t-cal	t-crit
Equipment available in workshop	13.38	3.66	4.12	1.96
Equipment Needed in workshop	18.17	4.62		

Table 1 shows the t-test analysis on equipment available and equipment needed in the workshop for teaching and learning of TVET. The result revealed that the equipment available in the workshop had a mean of 13.38, the standard deviation of 3.66 while the equipment needed in the workshop had a mean of 18.17 with standard deviation of 4.62. The r-cal stood at 4.12 and r-crit stood at 1.96. In view of this, the hypothesis was rejected. This signifies that there was significant difference between equipment available and equipment needed for the teaching/learning of TVET in tertiary institutions for sustainable national development.

Null Hypothesis 2: there is no significant difference between the current physical environmental condition of workshop and the needed environmental condition of workshop for students’ competence and skills acquisition in TVET for sustainable national development.

The result of the analysis is shown in Table 2

Table 2: t-test Analysis on Current Physical Environmental condition and Needed physical environmental condition of Students’ Workshop

Groups	Mean	SD	t-cal	t-crit
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Current Environmental condition	36.40	9.30		
Needed environmental condition of workshop	56.20	12.51	6.17	1.96

Table 2 shows the t-test analysis on current physical environmental condition of workshop and the needed physical environmental condition of students’ workshop for teaching and learning of TVET in tertiary institutions. The result revealed that the mean for current environmental workshop condition stood at 36.40, standard deviation stood at 9.30 while the needed environmental condition stood at 56.20, standard deviation stood at 12.51. The r-cal stood at 6.17 and r-crit stood at 1.96. In view of this, the hypothesis was rejected which signifies that there was significant difference between current physical environmental condition and the needed physical environmental condition of students workshop for teaching/learning of TVET.

Null Hypothesis 3: there is significant difference between the current students’ exposure to the use of tools and the needed students’ exposure to the dynamic and effective use of tool for students’ competence and skills acquisition in TVET for sustainable national development

Table 3: t-test Analysis on Current Students’ exposure to use of tools and Needed exposure of students to dynamic use of tools in TVET

Groups	Mean	SD	t-cal	t-crit
Students’ exposure to tools	19.44	4.40	6.78	1.96
Needed environmental condition of workshop	21.79	4.67		

Table 3 shows the t-test analysis on current students exposure to the use of tools with a mean of 19.44 with the standard deviation of 4.40 while the students’ expected exposure to dynamic and effective use of tools in the laboratories stood at 21.79 with the standard deviation of 4.67 The r-cal stood at 6.78 and r-crit stood at 1.96. In view of this, the hypothesis was rejected. This signifies that there was significant difference between current exposure of students to the use of tools and the needed exposure of the students to dynamic and effective use of tools in the laboratories and workshop for teaching/learning of TVET.

Discussion of Findings

The first finding of the study shows that there is significant difference between equipment available and equipment needed for the teaching/learning of TVET in tertiary institutions for sustainable national development.. This finding is in line with Adebile (2011) whose study posits that the equipment and instruments in some of the institutions where TVET is offered need to be upgraded since technology is ever-advancing. The argument of



Adebile (2011) is so plausible because the influx of advanced technology in the world of work today calls for standardization of TVET laboratories with latest equipment and instrument for teaching and learning so that TVET students will acquire the expected skills and competence needed to fit into the world of work.

The second finding of the study revealed that there is significant difference between current physical environmental condition and the needed physical environmental condition of students' workshop for teaching/learning of TVET. This finding agrees with Awogbenle and Iwuamadi (2010), whose studies revealed that for TVET students to perform maximally, the physical environmental condition of students' workshop for teaching and learning should be upgraded in the areas of adequate lightening, safety etc. These authors further stressed that

Finally, the finding of the study indicates that there significant difference between current exposure of students to the use of tools and the needed exposure of the students to dynamic and effective use of tools in the laboratories and workshop for teaching/learning of TVET. Modi (2008) supports the finding of this study that it is expedient for the TVET students to be adequately exposed to the dynamic and effective use of laboratories tools. This if done, will provide the latest skills, knowledge and competence for the students

Conclusion

Based on the findings, the study concluded that the skills acquired by TVET graduates at present may soon become a mis-match with the TVET skills expected in the labour market, and if adequate steps are not taking by the schools management to equip the students laboratories and workshop with modern equipment and the needed environment for teaching and learning, it would amount to producing TVET graduates that may be unemployed, and this will increase more the rate of unemployment that may lead to more evil vices in our societies.

Recommendations

Based on the findings of the study, it is hereby recommended that: -

- 1 Heads of Departments of Vocational and Technical Education in Nigeria universities should double efforts to procure adequate up-to-date equipment and instruments for the use of the students.
- 2 There is need for the department to encourage lecturers at different academic platforms(sponsorship for conferences, training workshops etc) to try as much as possible to update their knowledge, skills and competence in the use of these modern laboratories equipment and instrument so that they would be able to impart the skills and competences into their students adequately.
- 3 Students of TVET in Nigeria universities should be exposed to use of dynamic and effective tools that would enable them to contribute meaningfully in the world or work.



References

- Adebile, O. O. & Shangodoyin, D. K. (2011). "The Need for Science and Technology Driving in Sustainable Socio-Economic Development of Nigeria", *Journal of Sustainable Development* 4(4), 152-159.
- Afeti, G. (2006). Technical and Vocational Education and Training for Industrialization. Paper presented at the Commonwealth Association of Polytechnics in Africa.
- Alamu, J. F & Olukosi, J. O. (2008). *Simplified Research Methodology: Principles and Practice*. Great Glory Publishers Ltd, Zaria, Nigeria. .15-17.
- Aliyu, M.M. (2006). *Business Education in Nigeria: Trends and Issues*. Gosten Print Media Limited, Offa. 25-26
- Anikweze, C, M. (1995). *Conducting Purposeful Educational Research: Essentials and Sequences*. Chike Printing Press Limited, Nike, Nigeria, pp 29-55.
- Audu, R & Kasim, Y. B. (2013) Technical Vocational Education: Current Trends (online) <http://w.w.w.Techtarget.com/cloud> server. Retrieved on 31st March, 2017.
- Awogbenle, A.C. & Iwuamadi, K.C. (2010), "Youth Unemployment: Entrepreneurship Development Programme as an Intervention Mechanism", *African Journal of Business Management* 4(6), 1-5
- Butterfield, S. (2000), "*Technical and Vocational Education through Open Learning Trends, Developments and Issues from a Local Perspective* Publication of Open Polytechnic, New Zealand Press. Pp. 1-6.
- Ekpenyoung. D. (2005). Entrepreneurial Education for Vocational Technical Students. A paper presented at the fourth international Conference on Vocational Technical Education on August, 16th – 20th.
- Modi, D. (2008). Some Correlates of Vocational Orientations of some selected Schools Students. *Journal of Business Education*. 6(3):65