CHALLENGES FOR SUSTAINABLE CAPACITY BUILDING OF VOCATIONAL AND TECHNICAL EDUCATION (VTE) STUDENTS IN COLLEGES OF EDUCATION TOWARDS THE MILLENNIUM DEVELOPMENT GOALS (MDGS)

Ibiwumi Abiodun Alade, Ph.D and Olusola Olufunmilayo Adebanjo

Abstract

It is evident that some candidates still struggle for admission after their preliminary studies in vocational and technical education programme. This observation added to the doubtful academic and vocational capacity of the preliminary studies candidates to meet the challenges ahead informed this study which empirically examines the challenges for sustainable capacity building of vocational and technical education students in colleges of education towards the millennium development goals. The descriptive survey research covered the Vocational and Technical Education (VTE) Departments of two Colleges of Education in Nigeria in which 120 male and female students were purposively sampled. A self–designed questionnaire was used to collect data relevant to the main research question and two null hypotheses generated for the study. The findings record a 50.0% adequacy of the basic courses offered in preliminary studies programme, but a gross inadequacy of 52.7% of the preliminary studies programme, but a gross inadequacy of 52.7% of the preliminary studies for capacity building. Also, a significant difference was recorded between the categories of VTE students’ perception on the adequacy of the preliminary studies for capacity building (t-cal (3.32) > t-crit (1.92)) towards millennium development goals.

It is submitted that there is a need for a revisitation of the preliminary studies of VTE in content and practice, and that a more responsive approach to the programme by the stakeholders of education are essential for improvement.

Introduction

The teeming population of the prospective candidates aspiring for higher education in the existing public and private tertiary institutions in Nigeria is alarming. Since the institutions cannot accommodate all at a time, and that a high percentage of the intending candidates are deficient in at least some of the subjects relevant to their courses of interest, the place of preliminary programmes in building their capacity for both the academic and vocational challenges becomes significant. Capacity building could be described as the process of equipping individuals with knowledge and skills to enable them solve the complex problems of living usefully for themselves and make worthwhile contributions to the overall progress and development of the society. This description has its justification in the fact that education deals with the development of human resources.

Among such human resources whose potentials should be developed so that in due course they could be fully tapped for proper utilization in the process of nation building are vocational and technical education trainees in Nigeria tertiary institutions. Added to this category are the prospective candidates who have interest in vocational and technical education programmes in Nigeria. It is pertinent to declare affirmatively from the outset that it can be suicidal to neglect the sustainability of capacity building in this aspect of the country’s educational programme not only for preliminary studies in tertiary institutions and even at the various higher levels and courses in institutions of higher learning.

Although, various perspectives abound on capacity building for preliminary studies and in preliminary programmes, the nomenclature in this paper is a focus on what should be done in the area of capacity building not only for preliminary programs in vocational and technical education, but also for subsequent preparations towards the Millennium Development Goals (MDGs). There are many challenges facing capacity building in Vocational and Technical Education (VTE), hence, this paper empirically approaches the area of study with due consideration for the relevant sub themes explored as follows.
Philosophical Perspectives of Capacity Building through Vocational and Technical Education Courses in Tertiary Institutions

Vocational and technical education is obviously very important aspect of the Nigerian educational system. Vocational education develops occupational competence and teaches those skills which enable an individual to earn a living. In the philosophy of the National Policy on Education (FGN, 2004), technical education is seen as the aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge. It thus provides the skill and manpower for occupation in industries and other engineering services required by society in respective degrees.

The capacity for creative upbringing of an individual to fit into the social milieu of his society is a motive embedded in Vittorino da Feltre (1378-1448) philosophy recorded in Osokoya (1999) that education was to produce good citizens with a sense of social obligation and social things first and not from books. That children must learn through plays and “practical things”. By implication, practical teachings and learning could only lead to the production of trained graduates with high capacity to “do”. This conception is expected to be brought into play right from preliminary studies in tertiary institutions.

A more pragmatic basis for sustainable capacity building of vocational and technical education students is in Greek word “pragma”. A deed or doing which later became the foundation of the later philosophical thinking of John Dewey. Pragmatism is concerned with means rather than ends (Schofield, 1980). It is as a result also known as instrumentalism. Pragmatic values are developed as a result of doing something in a particular situation which is the condition for capacity building rather than being too theoretical. Pragmatic approach to capacity building makes pragmatic potentials to emerge as a result of experience. In the submission of Anyakora and Ekwueme (2000) to a similar argument, they opined that vocational/technical education can only achieve target objectives and play its rightful role when the system is good and functional enough to do so.

Millennium Development Goals (MDGS) and Vocational Technical Education: Any Relationship?

At various times in the nation’s approach to sustainable development, various programmes have been pursued in pursuance of the Federal Government’s commitment to achieve Education For All (EFA) and the Millennium Development Goals (MDGS). Of interest and relevant to this study is MDGS. The Millennium Development Goals (MDGS) as recorded by Barbara, et al (2003) are:

Goal 1: Eradicate extreme Poverty and Hunger
Goal 2: Achieve Universal Primary Education
Goal 3: Promote Gender Equality and Empower Women
Goal 4: Reduce Child Mortality
Goal 5: Improve Maternal Health
Goal 6: Combat HIV/AIDS, Malaria, and other Diseases
Goal 7: Ensure Environmental Sustainability
Goal 8: Develop a Global Partnership for Development

Through the vocational and technical programmes of tertiary institutions, a well-equipped individual with the capacity for productive performance in the society would no doubt, be an emblem of MDGs directly or indirectly in one form or the other.

Specifically, a vocational technical product of higher institution with sustainability capacity to survive in the society:

- Would not be a victim of poverty and hunger;
- Must have acquired basic education at the lower levels;
- Would have the potentials empowering him to defend his gender;
- Is assumed to be morally upright;
- Is expected to be decent and clean;
- Is expected to join in the forward march at developing and sustaining his environment; and
Should work co-operatively along with others.

Moreover, the capacity building of vocational and technical education students for preliminary studies in tertiary institutions is a function of the four distinct stages in the Nigerian educational systems which are Pre-primary, Primary, secondary and Tertiary or higher education. The lower levels produce children who move on to the next higher levels. This kind of relationship serves complementary purposes. For example, if the primary school stage produces half illiterates, it will reflect in the standard at the secondary school level. In the same vein, the standard of higher education could be adversely affected if the secondary school graduates are vocationally and academically weak.

As reported by Ogbonnaya (2000):

Higher education must be built upon the foundations laid by primary and secondary education and that if the foundations were too weak or too narrow; higher education would not be able to meet the required needs of the nation. Weak foundations at the lower levels would affect higher education adversely (p.53).

This connotes that for capacity building for preliminary studies, a balance between elementary secondary and higher education must be fostered and maintained. These in turn will strengthen the quality of the products of such educational institutions. All are manpower producers – capacity building institutions.

Adequacy of Preliminary Studies and Courses in Tertiary Institutions for Sustainable Capacity Building of Vocational Education Students.

One of the lingering problems of vocational and technical education is how to make it work. Our vocational/technology education is accused of lacking practicability (Ezeabikwa, 2003). The tertiary institutions graduates are unemployed because they lack the sustainable human capacity/potentials for their vocational choice, and cannot put their education to work. It is also noted that the adequacy of the preliminary studies and courses offered in tertiary institutions for sustainable capacity building of vocational and technical education students has been in doubt for quite some years now.

Of interest to this study are the preliminary courses at the college of education level. The skill-based options which are categorized as vocational and technical education courses in Nigeria Colleges of Education and Universities vary from one institution to the other. However, in this paper, the following course options are regarded as vocational occupations, hence, by nomenclature are vocational and technical education programmes in which Pre-NCE programmes and regular programmes are offered.

(i) Agricultural Education
(ii) Business Education (Secretariat Studies inclusive)
(iii) Fine and Applied Arts.
(iv) Home Economics (Food and Nutrition, Home and Hotel Management inclusive)
(v) Technical Education

The general objectives of each of the identified vocational and technical education options as identified in the Brochure of School of Vocational and Technical Education of Tai Solarin College of Education (2002) are stated as follows:

Pre-NCE Agricultural Education: The general objective of the preliminary course in Agricultural Education is to prepare senior secondary school leavers or its equivalents with deficiencies in entry qualifications to enter direct NCE programme in Agricultural Education;

Pre-NCE Business Education Programme: This programme prepares holders of Senior Secondary School Certificate and holders of Grade TWO Teachers’ Certificate or their equivalent, for direct entry to the regular NCE programme without taking any external examinations;

Pre-NCE Fine and Applied Arts: The Pre-NCE Fine and Applied Arts programme is for a period of one session developed to help students understand, analyse, interpret and apply the elements and
principles of art – their nature, function as well as the knowledge of creative design processes with a view to acquiring skills and entry qualifications for admission into direct NCE programme in Fine and Applied Arts;

**Pre-NCE Home Economics:** This preliminary programme:
(i) Provide the students the basic knowledge and skills required in food preparation, home management and acquaint them with the basic concept of textile and,
(ii) Prepare the students for admission into NCE programmes;

**Pre-NCE Technical Education:** The general objective of the Preliminary Course in Technical Education is to prepare senior secondary schools leavers or its equivalent that lack the pre-requisite qualification to enter the regular NCE programme without taking any external examination.

It is evident in the Nigerian environment that at the end of the preliminary studies, some of the candidates still roam about the street, and struggle around the colleges of education environment to gain admission into the regular NCE programmes. They strive to secure a course in colleges of education through external examinations and some internally organized examinations organized by matriculation board and colleges of education respectively. As a result, the place of preliminary programmes as a springboard for capacity building of candidates, vocational and technical education candidates inclusive, towards the millennium development goals become skeptical to the stakeholders of education. On this background, this study was carried out to examine the challenges for sustainable capacity building of vocational and technical education students in colleges of education towards the Millennium Development Goals.

**Research Question**
The main research question raised in this study is “how do the vocational and technical education students perceive the adequacy of the preliminary studies in colleges of education for capacity building towards the millennium development goals?”

**Research Hypotheses**
Two null hypotheses were generated and tested at 0.05 level of significance in the study, they are:

- **H01:** There is no significant difference between pre-NCE students and higher level (NCE 1,2,3) students’ perception of the adequacy of the preliminary studies in enhancing capacity building towards Millennium Development Goals.
- **H02:** There is no significant difference between male and female students’ perception of the adequacy of the preliminary studies in enhancing capacity building towards Millennium Development Goals.

**Methodology**

**Research Design**
The study is a descriptive survey, which is based on the existing information and relevant data useful for this study. No variable was manipulated since they had occurred already.

**Target Population and Sample**
The entire Pre-NCE students and the regular NCE 1, 2 and 3 (with Pre-NCE background) vocational and technical education students in both Emmanuel Alayande College of Education, Oyo and Osun State College of Education, Ilesha constitute the population for the study. Purposive sampling techniques was used as those in the regular NCE 1, 2, and 3 programmes, and in the areas of Agricultural Education, Business Education, Fine and Applied Arts Education, Home Economics Education and Technical Education were sampled. In all, 120 students were sample and used as participants in the study. Pre-NCE Students – 50; NCE 1, 2 and 3 students – 70; Male students – 85; Female students – 35.

**Instrument and Validation**
A ten-item questionnaire termed Capacity Building of Vocational and Technical Education Students’ Questionnaire (CBVTESQ) was designed by the researchers. The bio-data section (A) of
the CBVTESQ included information on state, name of college, gender and level, while section B
contained ten items relevant to the course provision, offerings and delivery in the preliminary studies
at NCE level. A three-point scale of Very Adequate (VA), Fairly Adequate (FA) and Inadequate (IA)
was used to elicit the relevant responses from the participants. The CBVTESQ was face and content
validated by experts in vocational and technical education as well as item analysts (evaluators) in
terms of the suitability of the items, phrasing, wording, content coverage and adequacy. The reliability
of CBVTESQ was determined by using Cronbach Alpha coefficient of reliability. A reliability of 0.89
obtained was considered reliable enough for the study.

Administration of the Instrument

The Colleges of Education sampled were visited and after a brief explanation on the purpose
of the study to the participants, they were asked to respond to the items in the questionnaire. The data
collection lasted for about two weeks.

Method of Data Analysis

Descriptive statistics of frequency count and percentages was used along with the inferential
statistics of $t$-test to answer the research question and the two null hypotheses as appropriate.
Thereafter, the results were presented in Table 1

<table>
<thead>
<tr>
<th>S/No</th>
<th>Adequacy of Preliminary Studies in Vocational &amp; Technical Education</th>
<th>Very Adequate (VA)</th>
<th>Fairly Adequate (FA)</th>
<th>Inadequate (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The curriculum provisions in objectives content, process and delivery for capacity building</td>
<td>78 (65.0)</td>
<td>15 (22.5)</td>
<td>27 (22.5)</td>
</tr>
<tr>
<td>2</td>
<td>Adequacy of the continuity in learning between preliminary studies and the home</td>
<td>12 (10.0)</td>
<td>3 (25.0)</td>
<td>78 (65.5)</td>
</tr>
<tr>
<td>3</td>
<td>Adequacy of the relationship between the preliminary studies, life experiences and the environment.</td>
<td>15 (12.5)</td>
<td>65 (54.2)</td>
<td>40 (33.2)</td>
</tr>
<tr>
<td>4</td>
<td>Adequacy of the preliminary studies contribution to the personality development of the student towards regular NCE programme.</td>
<td>20 (16.7)</td>
<td>31 (25.8)</td>
<td>69 (57.5)</td>
</tr>
<tr>
<td>5</td>
<td>Adequacy of orientation preparation, academic building and encouragement towards enquiry and creativity</td>
<td>25 (20.8)</td>
<td>26 (21.7)</td>
<td>69 (57.5)</td>
</tr>
<tr>
<td>6</td>
<td>Adequacy of the learning environment for preliminary studies programmes</td>
<td>10 (8.3)</td>
<td>30 (25.0)</td>
<td>69 (66.7)</td>
</tr>
<tr>
<td>7</td>
<td>Adequacy of the preliminary courses in meeting the physical, cognitive, affective and psychomotor needs of vocational and technical education students.</td>
<td>30 (25.0)</td>
<td>18 (15.0)</td>
<td>74 (60.0)</td>
</tr>
<tr>
<td>8</td>
<td>Opportunity for peer interaction in the learning situation or preliminary studies.</td>
<td>20 (16.7)</td>
<td>15 (12.5)</td>
<td>85 (70.0)</td>
</tr>
<tr>
<td>9</td>
<td>Adequacy of skills taught in the preliminary programme without the need to take any other external or internal examinations</td>
<td>21 (17.5)</td>
<td>15 (12.5)</td>
<td>84 (70.0)</td>
</tr>
<tr>
<td>10</td>
<td>Adequacy of the basic courses offered in preliminary studies programmes</td>
<td>60 (50.0)</td>
<td>10 (8.3)</td>
<td>50 (41.7)</td>
</tr>
<tr>
<td></td>
<td><strong>Average (%)</strong></td>
<td><strong>24.3%</strong></td>
<td><strong>23.0%</strong></td>
<td><strong>52.7%</strong></td>
</tr>
</tbody>
</table>

(The values in parenthesis are in percentages)

Analyzing the vocational and technical education students’ responses, it was discovered
generally that 24.3% and 23.0% are recorded for very adequate and fairly adequate of the preliminary
studies for capacity building towards the Millennium Development Goals (Table 1). This perception
indicates that the preliminary studies are 52.7% inadequate for capacity building in the area of
vocational and technical education for the regular NCE programmes and for the labour world. Perhaps
there are problems with the implementation of the preliminary studies programme in the Colleges of
Education sampled. However, the curriculum provisions in objectives, content, process and delivery for capacity building are rated to be very adequate with 65.6% rating (Item 1 Table 1). This is an indication that the Pre-NCE vocational courses objectives are still in order and could be achieved in the students for capacity building towards the Millennium Development Goals, though there are a few exceptions with 22.5% recorded for the inadequate response (Item 1, Table 1). Also, a fairly adequate response of 54.2% is recorded for the adequacy of the relationship between the preliminary studies, life experiences and the environment (item 3 Table 1). Similarly, a very adequate percentage of 50.0 is recorded for the adequacy of the basic courses offered in preliminary studies programmes at the Pre-NCE level.

Table 2: T-Test of Pre-NCE Students and higher levels (NCE 1, 2 and 3) Perception of the Adequacy of the Preliminary Studies for Capacity Building towards Millennium Development Goals.

<table>
<thead>
<tr>
<th>Categories of NCE Students</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>Cal-t</th>
<th>Crit-t</th>
<th>Df</th>
<th>Probability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-NCE</td>
<td>50</td>
<td>34.21</td>
<td>2.45</td>
<td>3.32</td>
<td>1.92</td>
<td>118</td>
<td>0.05</td>
</tr>
<tr>
<td>Higher level (NCE 1, 2, 3)</td>
<td>50</td>
<td>31.52</td>
<td>3.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cal –t (3.32) > Crit-t (1.92)

As shown in Table 2, since the t-cal (3.32) > Crit-t (1.92), it is evident that the null hypothesis (Ho) is rejected. This means that there is a statistically significant difference in the opinions of Pre-NCE students and the other category of NCE 1, 2 and 3) who responded to the questionnaire. More Pre-NCE students (X=34.21) were of the opinion that the preliminary studies for capacity building are not adequate compared with their counterpart with a mean score of 31.52.

Table 3: T-test of the differences in perception of Male and Female Vocational and Technical Education Students on the adequacy of Preliminary Studies for Capacity Building Towards Millennium Development Goals.

<table>
<thead>
<tr>
<th>Gender of Students</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>Cal-t</th>
<th>Crit-t</th>
<th>Df</th>
<th>Probability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>85</td>
<td>31.30</td>
<td>2.45</td>
<td>0.46</td>
<td>1.92</td>
<td>118</td>
<td>0.05</td>
</tr>
<tr>
<td>female</td>
<td>35</td>
<td>31.42</td>
<td>31.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cal-t (0.46) < Crit-t (1.92)

As indicated in Table 3, male and female vocational and technical education students sampled did not differ significantly in their perception of the adequacy of the preliminary studies for capacity building towards millennium development goals (Cal-t (0.46) < Crit-t (1.92))

The Challenges

The challenges for sustainable capacity building of vocational and technical education students in colleges of education towards the Millennium Development Goals are thus obvious as found in this study. The preliminary studies in colleges of education in the area of vocational and technical education need to be revisited in the following terms:

- There is the urgent need to ensure an adequate proper linkage between what is taught during the preliminary programmes, the home and the environment in general in practical terms for relevance and visible capacity building of the vocational trainees (Table 1).
- The personality development of the vocational trainees towards regular NCE programmes can only be ensured where the preliminary studies are better tailored to enquiry and creativity of the learners (Table 1). This calls for the practical relevance of do it yourself – “learning by doing”, so that students capacity for the challenges in the regular NCE programme and
potentials for work can be installed and sustained right from the scratch. In order to consolidate this challenge, Alade (2006) opined that:

...In a controlled environment, according to Dewey’s educational ideas, which are based on the philosophy of pragmatism, every learner is expected to play a participative role. This is the emphasis in technical education. Reducing the learner to a mere passive listener in the learning process is de-emphasized while tremendous efforts are made to make the classroom – workshop learning process activity dominated and the child, an active participant in the learning process (p.30)

- Another challenge is the need for improved human and non-human resources in colleges of education both in quality and quantity. The lack of enough facilities, tools and equipment for both the preliminary studies and higher course offering in the existing colleges of education by implication, often narrow down the vocational opportunity of learners and prospective candidates to a sustained capacity building through no fault of theirs. Their access to modern tools, equipment, machines and consumable materials for practical work has been greatly hindered by poor and non-conducive teaching and learning environment. During their preliminary studies programmes, another implication is that a major percentage of the very few Nigeria children studying vocational and technical education course combination in their respective colleges of education, preliminary level inclusive, are often edged out of their fundamental right to functional education.
- There is equally the need for better planning, supervision, monitoring and implementation of policies in the area.
- There is need for adequate disbursement and utilization of financial resources as well as adequate motivation of human personnel in the position of leadership.

With these, preliminary studies and regular NCE 1 to 3 vocational programme in colleges of education will thrive well in serving as a veritable instrument for capacity building of learners towards the laudable millennium development goals.

Conclusion

In conclusion, there is no gain saying that if the areas of emphasis examined in this paper are practically pursued, the level of technological, creative and practical skills essential for sustainable capacity building for preliminary studies and more would improve. On the whole, there is need for strong and systematic approach by all stakeholders of education to be more responsive in their attitude towards all the policy statements on vocational and technical education programmes. This will result in a drastic reduction of drop out rates from preliminary studies in tertiary institutions and also curtail both illiteracy and unemployment rates in the Nigerian society. More so, productivity will be enhanced and capacity building sustained.

References


