

REPOSITIONING VOCATIONAL AND TECHNICAL SKILLS ACQUISITION: A TOOL FOR ECONOMIC ADVANCEMENT

Abstract

Onuegbu, C.I.

The economic developmental potential inherent in vocational and technical education as a springboard for the take-off of small-scale indigenous industries, presents a challenge for the Educational System in Nigeria- In realization of this fact, the National Policy on Education thus, prescribes vocational and technical education as an instrument "par excellence" for effecting national development. This, by implication indicts our educational system to rise up to the challenge of exploring these skills that are inherent in vocational and technical training so as to enhance the acquisition of practical skills, basic and scientific knowledge and attitude as craftsmen and technicians at sub-professional levels while simultaneously accelerating the rate of expansion of small scale indigenous industries. There is strong and positive correlation between acquired vocational and technical skills and the industrial development of any nation. Whereas, the so called advanced countries of the world command greater economic powers in this regard. This paper studies the impact of vocational and technical education skills acquisition on small scale industrial growth and development. The paper offers an insight into the implication of the findings and makes recommendations.

Introduction

The simple fact that different countries have developed economically at different rates indicates that conditions for economic development are more favourable in some countries than in others. In Nigeria today, conditions for economic development have been limited by some major obstacles yet these persistent obstacles do not mean that there are no development potentials.

Historically, developmental experiences of other advanced economics have provided some encouragement on the prospect for development in Nigeria. That is to say, the countries that are now economically developed, were at a time economically under-developed. According to Washnis (1980). these advanced economies, at one time confronted obstacles similar to those that now exist in most under-developed economies. Washnis (1980), further posited that these developed economics were however able to identify the various indices for small scale industry growth and expansion. According to him, they were able to achieve these by not relying only on paper qualification but also by relying on technical skills and vocation. Their educational policies incorporated practical experience especially in the area of producing industrial tools and equipment needed in a manufacturing process environment.

Ndinechi (1981), pointed out that the educational dispensation which the colonial masters set up was criticized on several grounds, and the neglect of vocational and technical education in that system was a major criticism. Thompson (1983), also alluded further, that the bias for vocational and technical education in favour of grammar school was seen as being highly specialized and incapable of lending itself to the provision of the pre-vocational preparations needed by youths in a democratic society. Moreso, the committee appointed to 'review the educational system in Western Nigeria (1961), also stressed the need for vocational and technical education, thus:

"The case for increase in technical and vocational education at all levels is not difficult to establish. One only needs to consider the growth of industry, the expansion of agriculture, the Nigerianization scheme the increase in trades, the need for qualified secretaries and stenographers of all grades, the dearth of laboratory technicians, etc. All these and the duty the government owes the nation of providing livelihood for school leavers at different levels of education make it imperative for government to expand vocational and technical education".

From the above, it is obviously clear that the intrinsic value of vocational and technical education to national development are orchestrated even as early as independence. Adetoro (1986), in

his own contribution also stressed the need to fully integrate vocational and technical education into the educational system. Thus, far, it cannot be over emphasized the need to integrate vocational and technical education into the educational system. Instead, the question of interest begging for answers has to do with the effectiveness of the educational system in Nigeria. One would imagine whether the educational system is capable of enhancing the advantages of vocational and technical training for the industries and consequently the economic growth and development of the country. The need to reposition vocational and technical education thus arises especially in light of the goals and objectives of this form of education which according to National Policy on Education (1988), areas follows:

- i. Provide trained manpower in applied sciences, technology and business particularly at craft, advanced craft and technical level.
- ii. Provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development.
- iii. Provide training and impart the necessary skills to individual who shall be self-reliant economically.

These goals and objectives no doubt are the building blocks for indigenous small scale industry expansion especially for developing countries like Nigeria. Consider also the proceedings of the first, second and third congress of the Nigerian Academy of Education where Ndinechi (1991), revealed that the recommendations of the famous National Curriculum Conference of 1990, considered the following vocational and technical elements adequate for the new Nigerian Secondary Schools viz:

- i. Diversifying the secondary school curriculum to cater for the differences in talents, opportunities and roles open to students after their secondary school course,
- ii. Inculcating a spirit of self-reliance, industry, versatility and self-discipline in youths,
- iii. Equipping students to live effectively in our modern age of science and technology.

It must however be recognized that the above mentioned constitutes the ingredients for economic development, so long as vocational and technical education can be used as a tool for industrial growth and economic advancement. One would also expect that thus far, the educational system ought to enhance all the various policy recommendations designed to position vocational and technical education as the industry pivot that will usher in a new era of economic growth and expansion in a developing country like Nigeria.

However, the fact remains that vocational and technical education in Nigeria, for long, has been treated as an insignificant aspect of the country's educational system.. Fagbemi (1998) revealed that, vocational and technical education was then made primarily the concern of commercial and voluntary organizations, like the United African Company (UAC), and Missionaries Societies. He stressed further that vocational and technical schools and trade centres which were established at that time were mainly in-service training centres.

Unarguably, this goes to show that the educational ordinances several years back have one major characteristics in common, and that is the relegation of technical and vocational education to the background. Clearly enough, the need to reposition vocational and technical skill acquisition becomes necessary especially, given the benefit derivable from the contribution of vocational and technical skill acquisition to economic development, and more importantly, its impact to small-scale indigenous industrial growth and emancipation.

It must be appreciated, the strong national interest in accelerating and promoting developments are grounds for optimism. This is particularly true in view of the variety of educational policies that government can utilize to accelerate economic development. Especially significant are such policy measure as the extension of educational facilities, capital equipment provisions, funds, and encouragement of entrepreneurship. These problems of the pasts, warrants investigation.

Statement of Problem

In this study, the problem essentially are that:

1. Under utilization of the various industrial skills acquired from vocational and technical education training will influence the rate of industrial growth and expansion.
2. Lack of commitment on the part of the educational system to encourage the intrinsic entrepreneurship values and abilities of vocational and technical training will influence economic development.

Hypotheses

The following hypotheses were tested:

- (i) There is no significant relationship between vocational and technical skill acquisition and small scale industrial growth,
- (ii) There is no significant relationship between industrial growth and economic advancement.

Method

The study was carried out with a population study of about Two Hundred and Fifty (250) respondents consisting of different categories of business and industrialists, the teaching staff and students of the School of Vocational and Technical Education, and also entrepreneurs specializing in technical and vocational product.

A random sample of two groups of each category was chosen out of the population of 250 respondents. The first group with a random sample size of sixty eight (68) respondents was used to study the impact of Vocational and Technical Acquired Skills on Small-Scale Industry growth, while the second group with a random sample size of eighty (80) respondents was used to study the impact of Small-Scale Industry Growth on Economic Advancement. The relationship between variables of the data drawn from the sample is not due to accident of sampling but signify the presence of statistical significance of the entire population from which the sample is drawn. The study was restricted to only a portion of the population due to some constraints which include the larger population study, time limit and resources.

Data Instrument

A fixed response type questionnaire relating to the aims of study was used to obtain and measure data. A pretest was conducted to ensure validity and reliability. The questionnaire was given to experts for comments on validation.

Data Collection

The returned questionnaire was organized and sorted in categories of responses for analysis. Responses were tallied and recorded to ensure accuracy.

Result

In this study, independence among variables in the hypotheses was tested. The (X^2) Chi Square is used to compare between the observed and expected frequencies. The Chi Square test is applied to measure comparisons.

Table 1 Impact of Vocational and Technical Acquired Skills on Small Scale Industry Growth.

IMPACT	SMALL-SCALE INDUSTRY GROWTH		TOTAL
	YES	NO	
High	28(22.23)	8(13.76)	36
Low	14(19.76)	18(12.23)	32
Total	42	26	68

Table 2 Impact of Small-Scale Industry Growth on Economic Advancement

IMPACT	ECONOMIC ADVANCEMENT		TOTAL
	YES	NO	
High	30(22)	14(22)	44
Low	10(18)	26(18)	36
Total	40	40	80

Table 3 Calculated and Table Values for Test Statistics

	CaIX2	T Value	Remark
Hypotheses 1	8.29	3.84	Reject Null Hypotheses
Hypotheses 1!	12.90	3.84	Reject Null Hypotheses

$$df = (2 - 1)(2 - 1) - I(P.05)$$

Source: Computer From Field Work Discussion of Findings

Analysis of results as shown in table I: the impact of vocational and technical skill acquisition on small-scale industry growth, revealed that out of forty-two (42) respondents who agreed that there is an impact of technically acquired skills to small-scale industry growth, twenty-eight (28) believed that there is actually a higher impact while only fourteen (14) believed that the impact is low.

Table III, (see appendix) calculated chi square (χ^2) for testing hypotheses I - there is no significant relationship between vocational and technical acquired skills and small-scale industry growth, further revealed the calculated (χ^2) chi square of 8.29 exceeding table value of 3.84 thereby, rejecting the hypotheses, thus, there is a strong relationship between vocational and technical education skill acquisition and a high impact on small-scale industry growth as supported by table I.

The growth and expansion of small-scale industries is a positive economic index for developing countries, because for any country to develop economically, it must firstly, develop its production base. A nations ability to produce at home, the industrial raw material needed for further manufacturing process is an added advantage in the pursuit for economic prosperity.

Growth of small-scale industries will not only guarantee sustainable economic advancement, it will also guarantee employable skills, a byproduct of vocation and technical training.

Table II - the impact of small-scale industry growth on economic advancement also substantiated the above assertion. It revealed that out of forty (40) respondents who agreed that there is actually an impact of small scale industry growth on economic advancement, thirty (30) believed there

is a very high impact while only ten (10) believed the impact is low. Table IV, (see appendix) calculated chi-square (χ^2) for testing the hypotheses - there is no significant relationship between small-scale industry growth and economic advancement, however, show a calculated χ of 12.90, exceeding the table value of 3.84 thereby rejecting the hypotheses. Thus, there is a strong relationship between growth in small-scale industries and economic advancement of any nation. Moreover, there is a very high impact on this relationship as supported by table II.

Implication of Findings

The findings in this study revealed that small-scale industry growth factor is associated with acquired skills inherent in vocational and technical education. This form of education which is obtainable at the technical colleges is equal to the senior secondary education but designed to prepare individuals to acquire practical skills. These skills acquisition, thus, becomes the needed tonic to jumpstart small-scale industrial take-off especially for developing countries like Nigeria. The skills so acquired are the consequences of the industry-oriented range of courses designed for vocational and technical colleges, and they are as wide as possible, and include but not limited to the following:

- Agricultural implements and equipment mechanic's work.
- Automobile engineering practices such as auto body repairs, spray painting, auto electrical works, auto mechanics.
- Air conditioning and refrigeration: mechanic works.
- Mechanical engineering craft practice.
 - Welding and Fabrication engineering craft practice.
- Instruments mechanic works.
- Electrical installation and maintenance works.
- Radio, television and electrical works.
- Block laying, bricklaying and concrete works.
- Plumbing and pipe fitting.
- Furniture and upholstery making.
- Hospitality, catering and craft practice.
- Textile trades: garment making (ladies/men dresses).
- Beauty culture trades: cosmetology.
- Leather goods manufacture including shoe making.
- Business trades: typewriting, store keepings etc.
- Data processing and book-keeping.

It must be recognized that vocational and technical education is an integral part of technological development. Therefore repositioning this form of education, given the above mentioned industry-oriented range of courses will bring about small-scale industrial growth which will account for economic advancement as an index of economic and national development. Acquisition of industry-oriented practical skills, will lend itself to the problems of many new occupations in Nigeria today, involving technology and requiring technicians to install, maintain and improve them.

Growth in these new occupations and the associated manpower needs, suggests the need for technological oriented education in our secondary schools to address the following broad

aspects:

- i. Technology as part of general education for every secondary school pupil irrespective of his or her future,
- ii. Technology to provide orientation and preparation for those who have the aptitude and the desire to pursue advanced technological education in the colleges of education, polytechnics and universities.
- iii. Technology to provide orientation and some basic skills with which to start a life to work for the vast majority of pupils who do not have the aptitude and desire to pursue advanced technological education.

So far, however the general belief and orientation by school leavers have been education for "white collar job" and consequently, it is also believed that the rate of growth of students population may be described as being in geometric progression, while the growth of job opportunities have been in arithmetic progression. The neglect of vocational and technical education in the national educational system may be responsible in this regard.

Recommendation and Conclusion

The implication of the findings in this study bring into focus, awareness for the need to enhance vocational and technical education in line with its goals and objectives as prescribed by the National Policy on Education, viz:

- i. provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels;
- ii. provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development;
- iii. provide training and impart the necessary skills to individual who shall be self-reliant 'economically.

Arguably, the question could be asked, why are the goals and objectives necessary for vocational and technical education? In providing answer to this question, vocational and technical education is (he bridge between man and his work. Millions of people need this form of education in other to earn a living. livery man wants to provide for his family with honour and dignity and to be counted upon, as this is one of the major goals of education and is important both for the establishment of small-scale enterprises and the industrial growth of the country, and also for the individual growth as well.

In light of the above, hence the national objectives for vocational and technical education should be as follows:

- i. training people to meet the needs of small-scale industries;
- ii. training to meet the needs of individuals;
- iii. training to meet the needs of the nation.

It must be appreciated a self-fulfilling need for work for the individual, which translates into gainful employment, hence the close relationship between the work people do and economic prosperity of the nation. Work sets the standard of living, influences family relationships, determine the quantity and quality of our civic participation, and ultimately, control our social, cultural and economic activities.

If vocational and technical education can be a vital part of the determination of one's work life, then it is almost the most important aspect of the total process of education.

Vocational and education must be thought of as an integral part of education and not as a separate or distinct entity existing by itself. Therefore, as the nation climbs towards economic

advancement, it becomes more and more necessary that its citizens need both academic and vocational education. It must be recognized that the part to economic advancement is an uphill task, but given the willingness to bear the cost of development by placing vocational and technical skill acquisition in its rightful position, through practical commitment on the part of government and the educational system, then it can be generally concluded that the prospects for economic advancement are high.

As the rate of advancement is accelerating, the obstacles to further development may then be easily reduced. Consequently, social, political and economic changes will have reciprocal influence on each other. Once momentum is gained, the process tends to be cumulative, each advancement creates the condition for further advancement.

APPENDIX

Table III; Calculation of χ^2 for Testing Hypotheses I

i	j	Oij	SI	Oij- $\sum j$	(oij- $\sum j$) ²	(Oij- $\sum j$) ¹
						$\sum J$
1	I	28	22.23	5.77	33.29	1.49
1	2	8	13.76	-5.76	33.17	2.41
2	1	14	19.76	-5.76	33.17	1.67
2,	2	18	12.23	5.77	33.29	2.72
						«.2y

Table IV: Calculation of χ^2 for Testing Hypotheses II

i	j	Oij	$\sum j$	Oij- $\sum j$	(oij- $\sum j$) ²	(Oij- $\sum j$) ²
						SB
1	I	30	22	8	64	2.90
1	2	14	22	~8	64	2.90
2	1	10	18	-8	64	3.55
2"	2	26	18	8	64	3.55
						12.90

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