

PUBLIC PRIVATE PARTNERSHIP IN THE DEVELOPMENT OF GOVERNMENT TECHNICAL COLLEGES IN NIGER STATE: AN ASSESSMENT OF AREA OF NEEDS

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Abstract

This study was conducted to investigate the area of needs for public private partnership (PPP) in the development of technical colleges in Niger State. The study adopted survey research design. The population for the study consisted of 158 technical teachers from the six technical colleges in Niger State and 22 administrators of technical education from the management of the technical colleges and Niger State Science and Technical Schools Board, Minna. The sample size for the study is 100 subjects, randomly selected. The instrument was a 30-items questionnaire which was face validated by three experts. A reliability alpha of 0.86, 0.78 and 0.81 was obtained using Cronbach Alpha. Mean and t-test statistics were used for data analysis. A mean of 2.50 was adopted as a cut-off mark. Any item with 2.50 and above was regarded as needed or accepted while t-test was used to test null hypotheses at .05 level of significance. The finding among others, showed that intervention is needed from PPP in the areas of workshop, modern tools, equipment, practical consumable materials, laboratories, digital libraries among others in developing technical education. The study also revealed that construction of standard workshops, provision of modern tools, machines and equipment as well as construction of standard laboratories, digital libraries, are ways of providing the area of needs for intervention by PPP for developing technical education in technical colleges. It was therefore recommended that technical colleges should not rely on government's sole funding, but should also partner with the private sector such as community based organizations and non-governmental organization in the provision of learning facilities for skill acquisition.

Keywords: Public Private Partnership, Development, Technical Education, Assessment, Areas of needs.

Introduction

In any dynamic society, all sphere of human activities undergo series of changes in her attempt to master and improve on the environment. This has consciously increased the quest for the need for well trained and efficient workforce replete with requisite practical skills in solving the challenges of humanity, hence the emergence and development of technical education (T.E). Africa Union (2007) described technical education as a means of empowering individuals to take control of their lives and environment, while Alenoghena (2010) stated that technical education is the most effective human resource development strategies worldwide. Alenoghena further explained that TE prepare trainees for jobs that are based on manual or practical activities, Ohize (1998) also explained that every form of development is strictly tied to the level of technological development and this in turn is hinged unto human resource in technology. For any nation to be industrialized, there is the need for technological development.

Consequently, the level of industrialization of any country is directly a function of the nation's technological manpower.

The quest to meet the nations technological manpower underline the establishment of technical colleges which United Nation Children's Fund (UNICEF) (2001) explained is saddled with the task of offering training in various trades to produce skilled workers, artisans and craftsmen in preparation for middle level technical manpower. Technical education thus, gives priority to expanding specific occupational skills and emphasizes the preparation of the students to enter into the field of work. The realization of these goals has not been encouraging. One of the major causes of this shortfall is financing. Over the years, financing of technical education has been the sole responsibility of the government. Education generally is described as an expensive social service which requires sufficient joint funding of all tiers of government. Federal Republic of Nigeria (2004) clearly stated that the financing of education is a joint responsibility of the federal, state and local governments and the private sector. In this connection the government welcomes and encourages public private participation in the funding of education.

The concept of public private partnership is hinged on the involvement of the private sector in the delivery of public social services of which education is a critical sector. In broad terms, Ndagi (2010) explained that PPP encompass a very wide diversity of partnership and the circumstances in which they arise as agreed cooperative venture that involve at least one public and one private sector institution as partners. PPP is further referred to as a contractual arrangement between a public sector agency and a for-profit private sector concern, whereby resources and risks are shared for the purpose of delivery of a public service or development of public infrastructure. The special features of PPP as enumerated by Ndagi includes: partnership involves two or more actors at least one of which is public and another from the private business sector, each participant is a principal, capable of bargaining on its own behalf rather than having to refer back to other sources of authority. Hence, the public sector has to set up a special unit capable of entering into partnership before collaboration become possible; Establishment of an enduring and stable relationship among partners; Each participant bring resources (material) or immaterial into the partnership to become genuine and there is shared responsibilities in activities and outcome to implies partnership.

Considering the state of technical education in Nigeria today, the private sector has roles to play. The current delivery of technical education is characterized by low quality, poor public perception, poor infrastructural facilities, poor management and inadequate funding among others. Federal Ministry of Education (2000) noted in the master plan marshalled out for technical and vocational education (TVE), that this aspect of education is in a state of crisis in Nigeria. The problems were categorized into three groups, structural imbalance and system configuration; inadequate resource input and consequent low output and poor societal attitude towards acceptance of TVE as an alternative form of education. These problems need to be address through public private partnership in the delivery of technical education.

PPP have demonstrated the ability to harness additional financial resources and operating efficiencies inherent to the private sector. The PPP approach may after all be the only option that has the proclivity of providing the much needed facilities in technical colleges, since very recently Wakili and Agha (2013) reported that president Jonathan described a PPP initiative as the only way the government could provide the much needed infrastructures for Nigerian citizens. Obozuwa (2011) also asserted that given the huge amounts needed and the drive necessary for development, the Nigerian government does not have the requisite capability to achieve this on its own and has thus among others options embarked upon the use of PPP for infrastructure development and thus addressing the challenges constraining the growth of Nigerian economy. To this end, Ossom (2005) outlined the expected outcome in basic education through PPP which has relevance for technical education to include; to provide a skill base from which local industries can tap from, at the exit point of the educational programme ensuring the acquisition of the relevant skills knowledge and experiences that are necessary for nation building. The global practice in PPP called for instituting partnership that increase access to quality education and other socio-economic services where government regulate the minimum standard of services and the private sector bring skills and core competencies while donors and business bring funding and other resources.

Training in technical education that requires the acquisition of skill must be taught with good facilities. Learning infrastructures which include well equipped workshop and steady electricity supply are paramount in technical colleges because of the practical oriented nature of the programme. The development of useful skills can be reinforced by the selection of appropriate learning facilities and resources. The availability of these learning facilities in technical colleges in Niger State are on the decline due to inadequate funding because the government has been the sole financier of technical education in the state. This situation has resulted in poor skills acquisition among these graduates of technical colleges. It has become therefore, imperative to involve the public private sector in the development of technical education in order to yield quality results in terms of skills acquisition in technical colleges.

The purpose of this study is thus to identify area of needs for public private partnership in developing technical education. Specifically the study identified:

1. The area of needs for public private partnership intervention in developing technical education.
2. How these needs can be provided by public private partnership in developing technical education.

Research Questions

Two research questions guided the study:

1. What are the areas of needs for public private partnership intervention in developing technical education?
2. How can the areas of needs be provided by public private partnership in developing technical education?

Hypotheses

Two null hypotheses were tested at 0.05 level of significance

- H₀₁: There is no significant difference in the mean ratings of teachers and administrators of technical education with respect to the areas of needs for public private partnership in developing technical education.
- H₀₂: There is no significant difference in the mean ratings of teachers and administrators of technical education on how the areas of needs can be provided by public private partnership in developing technical education.

Methodology

Design of the study: The study adopted survey research design. Nworgu (2006) stated that survey is considered suitable for the study that intends to solicit information from the respondents. This study is designed to obtain information from the teachers and administrators of technical education at technical college level.

Area of the study: The study was conducted at Niger State Science and Technical Schools Board (NSSTSB), Minna and six technical colleges in Niger State. These technical colleges are: Government Technical College, Eyagi-Bida; Government Technical College, Minna; Government Technical College Kontagora; Government Technical College New Bussa; Suleiman Barau Technical College Suleja and Mamman Kontagora Technical College Pandogari. The choice of NSSTB and the six technical colleges was informed by the fact that the NSSTB is responsible for the management of the technical colleges in Niger State.

Population for the study: The population of the study comprised of 158 technical teachers from the six technical colleges and 22 administrators of technical education which includes the management staff of technical colleges and Directors drawn from the NSSTSB, all in Niger State. (NSSTSB, 2013).

Sample and sampling technique: A sample size of 100 respondents were used which was made up of 78 technical teachers, thirteen (13) from each of the six technical colleges randomly selected and the 22 administrators were used for the study. No sampling of administrators because the population is small.

Instrument for Data Collection: A 30-items structured questionnaire built on four point scale was used to collect data for the study. The questionnaire items contained information gathered from the review of literature. The response scales of Highly Needed = 4, Needed = 3, Least Needed = 2, Not Needed = 1, for area of intervention needed and strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1, were used for how to provide the area of intervention.

Validation and Reliability of the Instrument: The instrument was validated by three experts of technical education in Niger State College of Education, Minna and NSSTSB, Minna. The instrument was trial tested on 20 respondents from Federal

Technical College, Shiroro who are not part of the main study. The analysis of the data obtained from the test using cronbach Alpha formular for internal consistency of polytomously scored response yielded reliability alpha of 0.86, and 0.78 for items in sections B and C and 0.81 for all items.

Method of Data Collection: Copies of the instrument were administered to the respondents with the help of four research assistant. The completed questionnaires were collected after 2 weeks. A total of 100 copies of the instrument were all correctly filled and returned. It was this number that was analyzed to generate data used for answering research questions and testing the null hypotheses.

Method of Data Analysis: The data collected from the respondents were analysed using mean and standard deviation and t-test. The mean of the response on 4-point scale was 2.50. Thus any item with a mean of 2.50 and above was regarded as needed or accepted while any item below 2.50 was regarded as not needed or not accepted. Standard deviation revealed the closeness or otherwise of the opinion of the respondents from the mean group, while t-test was used to test the null hypotheses at probability level of 0.05 level of significance.

Results

Research Question 1: What are the areas of needs for PPP intervention in developing technical education?.

Table 1: Mean ratings of Technical Teachers and Administrators on areas of needs for PPP intervention in developing technical education.

S/N	Items	Technical Teachers			Administrators		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
1.	Standard workshops	3.24	1.03	Needed	3.22	0.87	Needed
2.	Modern tools	3.42	0.93	Needed	3.32	0.84	Needed
3.	Practical Consumable materials	3.32	0.97	Needed	3.41	0.80	Needed
4.	Alternative source of power	3.19	1.05	Needed	3.36	0.95	Needed
5.	Standard laboratories	3.40	0.93	Needed	3.19	0.91	Needed
6.	Standard classroom	3.19	0.99	Needed	3.27	0.98	Needed
7.	Digital libraries	3.38	0.98	Needed	3.41	0.96	Needed
8.	Standard exhibition rooms	3.22	1.03	Needed	3.14	0.94	Needed
9.	Standard offices for staff	3.24	1.06	Needed	3.32	1.04	Needed
10.	Entrepreneurship Centre	3.59	0.75	Needed	3.36	0.90	Needed
11.	Borehole	3.44	0.88	Needed	3.32	0.89	Needed
12.	Capacity building	3.53	0.89	Needed	3.36	1.05	Needed
13.	Affiliate industries	3.33	0.89	Needed	3.45	0.67	Needed
14.	Warehouse	2.17	1.14	Not Needed	2.13	1.13	Not Needed
15.	Health Centre	3.44	0.85	Needed	3.55	0.60	Needed

Key: \bar{X} = mean

SD = Standard Deviation

From table 1, all the areas listed for PPP intervention in developing technical education are needed except item 14, i.e. warehouse which has a mean score of 2.17 and 2.13 for teachers and administrators of technical education respectively. This fall below the

cutting point of 2.50 which means that warehouse is not among the area of needs for PPP intervention. The remaining fourteen items each has a mean ranged from 3.19 – 3.59. This means that they are identified as areas of need for PPP intervention in developing technical education.

Research Question 2: How can the areas of needs be provided by PPP in developing technical education?

Table 2: Mean ratings of technical teachers and Administrators on how to provide the needed areas of intervention by PPP in developing technical education.

S/N	Items	Technical Teachers			Administrators		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
16.	Construction of standard workshops	3.27	1.02	Agreed	3.27	0.83	Agreed
17.	Provision of modern tools	3.42	0.90	Agreed	3.36	0.66	Agreed
18.	Availability of funds for Practical Consumable materials	3.60	0.74	Agreed	3.36	0.85	Agreed
19.	Provision of generating plants	3.31	0.92	Agreed	3.41	0.80	Agreed
20.	Construction of standard laboratories	3.23	1.07	Agreed	3.14	0.89	Agreed
21.	Construction of standard classroom	3.21	1.00	Agreed	3.23	0.97	Agreed
22.	Construction of digital libraries	3.71	1.01	Agreed	3.36	0.95	Agreed
23.	Construction of an exhibition hall	3.21	1.05	Agreed	3.22	0.82	Agreed
24.	Construction of standard offices	3.37	1.00	Agreed	3.27	0.94	Agreed
25.	Establishing entrepreneurship centres	3.54	0.88	Agreed	3.45	0.80	Agreed
26.	Sinking borehole	3.45	0.83	Agreed	3.32	1.04	Agreed
27.	Availability of funds for staff development	3.58	0.76	Agreed	3.36	0.66	Agreed
28.	Establishing affiliate industries	3.45	0.85	Agreed	3.41	1.01	Agreed
29.	Construction of warehouse	2.14	1.16	Disagreed	2.27	1.08	Disagreed
30.	Establishing Health Centres	3.33	0.95	Agreed	3.60	0.60	Agreed

Key: \bar{X} = mean

SD = Standard Deviation

The result on table 2 revealed that all the 14 items on how areas of needs would be provided by PPP in developing technical education responded to by both teachers and administrators of technical education, except item-29, have their mean ranged from 3.14 - 3.60. Each mean were above the criteria mean of 2.50, which means that all the 14 items were accepted. However, the response on item 29 i.e. construction of warehouse, by all the respondents have a mean score of 2.14 and 2.27 which fall below 2.50, this means that the respondents disagreed on the item.

Hypothesis One:

There is no significant difference in the mean ratings of teachers and administrators of technical education with respect to the areas of needs for public private partnership in developing technical education.

Table 3: t-test analysis of the mean rating of Teachers and Administrators of technical education on the area of needs for PPP intervention.

S/N	Respondents	N	\bar{X}	SD	df	Standard Error	t-cal	S (significant 2 tail)
1.	Technical teachers	78	3.24	1.09	98	1.52	1.46	.648
2.	Administrators	22	3.36	1.04				

^{ns} = Not significant at $P > 0.05$ level

The table 3 shows that the t-cal is 1.46 at 98 degree of freedom and 0.05 level of significance, while the s-value is 0.648, indicating no significant. The null hypothesis is accepted as postulated. Therefore, there is no significant difference in the mean ratings of teachers and administrator of technical education on the areas of needs for PPP intervention in developing technical education.

Hypothesis Two:

There is no significant difference in the mean ratings of teachers and administrators of technical education on how the areas of needs can be provided by public private partnership in developing technical education.

Table 4: t-test analysis of the mean ratings of teachers and administrators of technical education on how to provide the areas of needs by PPP in developing technical education.

S/N	Respondents	N	\bar{X}	SD	df	Standard Error	t-cal	S (significant 2 tail)
1.	Technical teachers	78	3.25	1.08	98	1.42	1.37	0.174
2.	Administrators	22	3.34	1.03				

ns = Not significant at $P > 0.05$ level

The table revealed that the t-value is 1.37 at 98 degree of freedom and 0.05 level of significance, while the s-value is 0.174 indicating not significant. The null hypothesis is accepted as stated. Therefore, there is no significance difference in the mean ratings of teachers and administrators of technical education on how to provide the area of needs by PPP in developing technical education.

Discussion

The data presented in table 1 provided answer to research question 1 on areas of needs for PPP intervention in developing technical education in technical colleges of Niger State. The finding revealed that out of fifteen perceived areas of needs, the respondents rated fourteen as area of needs for PPP's intervention in developing technical education.

These areas of needs includes standard workshop, modern tools, practical consumable, alternative source of power in the workshops, laboratories, classroom, digital libraries and exhibition rooms. Others includes entrepreneurship centre, borehole, capacity building, affiliate industries and health centres. This finding concurred with the study of Okwori (2007) when he examined the sponsorship of vital projects among the government, industries, parents and philanthropic organization for the development of vocational technical education to include basic areas of needs, such as: workshop; consumable practical materials, tools and equipment among others. Okwori's study identified and examined these facilities or projects as areas which deserved intervention by industries, NGOs and other stakeholders in partnership with government for the development of VTE.

Eindia (2002) also listed construction of workshops, laboratories, supply of alternative source of electricity, e-libraries, etc as area identified for PPP projects in vocational education and skills training institutions. This finding must have stemmed from the fact that, the area have suffer neglect because government has been the major financier of technical education and the current dwindling in the economy has made it even impossible for the government alone to provide the aforementioned projects for quality training in VTE. However, the respondents did not identify warehouse as area of need for intervention by PPP, probably they reasoned that with the exhibition rooms, students practical projects can be displayed and as such, there would be no need for warehouse.

Table 2 also revealed that the respondents accepted fourteen items on how the areas of needs can be provided, which includes: construction of standard workshop, provision of modern tools, availability of funds for practical consumable and provision of generating plant, others include construction of standard laboratories, classrooms, digital libraries, exhibition hall, offices, entrepreneurship centre, etc. This finding provides answer to the research question 2, which sought to find out how the area of needs could be provided by PPP in developing technical education in technical colleges of Niger State. This finding is corroborated by Umar, Audu and Idris (2007) and Okoye and Chijioke (2013) who stated that to achieve a sound technological know – how, technical and vocational institutions in Nigeria need to be equipped with the needed facilities / tools to work and practice with, through government partnership with the private sector in providing and maintaining suitable workshop, basic hand tools, equipment and structural facilities which includes classes, libraries, laboratories, among others.

The finding of this study also revealed that for effective training in technical education which embody practical skills acquisition, adequate funds must be made available for staff development, this is important because the technical teachers who are expected to impart skills must be kept abreast of new skills and modern tools, machines and equipment.

The result also showed that construction of affiliate industries to technical colleges is another way of promoting linkage between industries and technical institutions. Further findings of this study also revealed that the respondents did not view the construction of warehouse as a way of providing area of need by PPP in developing technical education. There was however, no significant difference in the mean responses of

teachers and administrators on the areas of needs for PPP intervention and how the area of needs can be provided by PPP in developing technical education in technical colleges.

Conclusion

The finding of the study show that, there is the need for PPP intervention in developing technical education in our technical colleges in the area of construction of standard workshops, laboratories, digital libraries, classrooms, etc. The intervention by PPP will provide the basic modern infrastructures and facilities required for effective skill acquisition, which is the essence of technical education. The effect of this will produce competent and skillful technical personnel which will be capable of leading the nation towards technological advancement.

Recommendations

Based on the finding of this study, the following recommendations were made:

- The government should create an enabling environment for the private sector intervention in the development of technical education by ensuring that terms of agreement are judiciously adhere to.
- For a wider PPP intervention in technical education, technical colleges should partner with non-profit organization such as, Non-Governmental Organizations, Parent Teachers Association, Community Based Organizations, etc. in the provision of learning facilities.
- Partnership between Education Tax Fund and private firms should be worked out to allow joint execution of ETF/PPP projects in developing technical education in our technical colleges.
- There should be established links between technical colleges and industries in such a way that the industries will provide requisite training and provide skills acquisition facilities for the trainees.

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