

BUSINESS/INDUSTRY AND UNIVERSITY COLLABORATION: A PANACEA FOR QUALITY GRADUATES

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Abstract

The study examined business/industry and university collaboration as a panacea for quality graduates in Bayelsa State. The study adopted survey research design and was guided by one research question and one null hypothesis. The population comprised 162 registered entrepreneurs in Bayelsa State as the operators of the SME business/industry. The instrument for data collection was a structured questionnaire containing 12 items and structured on a four point response scale of strongly agree (SA), Agreed (A) Disagree (D) and Strongly Disagreed (SD). Mean and standard deviation were used to analyze data relating to the research question while t-test statistic was used to test null hypothesis at 0.05 level of significant. The findings indicate that business/industry and university collaborations enhance quality graduates for industrial productivity in Bayelsa State. Based on the findings of this study, it was recommended amongst others that universities should embark on aggressive drive in partnering with industries in a way that will make such industries to fund research in their production lines. Universities can as well boost the employability profile of their graduates through work related training through solid industrial attachment.

Key words: *Business, Industry, University, Collaboration.*

Introduction

Linkages between business/industries and universities is a major source of contribution to quality education training programmes. Such collaboration is critical for skills development (education and training); the generation, acquisition and adoption of knowledge (innovation and technology transfer) and the promotion of entrepreneurship (start-ups and spin-offs). University industry linkages have significantly one of the most important agenda of higher education policy-making as well as economic development of any nation. Considering knowledge intensive economics, the importance of higher institutions of learning as strategic actors in



both national and regional economic development cannot be under-estimated given their potential to upgrade skills and knowledge of the labour force and contribute towards producing and processing innovation through technology transfer (Esham, 2008).

The success of businesses and industries in an increasingly competitive world market is contingent upon skilled personnel, who learn, grow and adapt to the changing markets and technologies. Industrialization can only survive through quality educational programme. Through collaborations, universities have grown to become catalysts in the growth of nations, for their roles are not only confined to human capital development but also in technology transfer, research and development, and innovation. Universities play crucial role in achieving economic growth in today's knowledge based societies through collaborating with business/industries (Pinheiro, 2015).

Through interactions or linkages, businesses organizations stand to benefit from highly qualified human resources such as researchers or students (Myoken, 2013). Business organization gain access to technology and knowledge (Barnes, 2009) and they make use of research infrastructure (Ankrah & AL Tabbaa, 2015). Universities, in return, benefit from additional funding provided, from access to industry equipment or from licensing or patenting (Barnes, 2009). For these benefits to be achieved and sustained the universities have three major roles to play. Firstly, the universities undertake a general process of scientific research and thereby affect the technological frontier of industries at the long run. Secondly, the universities partly produce knowledge which is directly applied in industrial production (prototypes, new processes among others). Thirdly, universities provide major inputs for industrial innovation processes in terms of human capital, either through the education of graduates who become industry researchers or through personnel mobility from universities to firms (Schartinger, 2009).

There are also many different types of collaborative ventures between industries/businesses and educational institutions. Greenberg (2011) identified six patterns of collaboration which included; cross training, cooperative work study, traditional, adult continuing education, shared facilities and the consultant pattern. According to Greenberg, the oldest and most common collaborative efforts between business/industry and education are co-operative work study programmes which make it possible for students to receive part of their education on the job where they can gain skills that are best learned with all the problems and constraints that are part of the private sector operation.



Another common example of such collaborative efforts is the cross training pattern, which utilizes a combination of industry and education personnel, facilities and curriculum. Cross training efforts permits both education and industry to pull their resources together. Higher institutions are well suited for the consultant pattern of collaboration, they are able to play to a pro-active role serving industry as technical expert and consultants in related education training and retraining while strengthening and enriching their teaching research programmes within the area of consultation.

Quality graduates are possible through exposure to industrial attachment as part of collaborative pattern between industry and education. Students will gain practical skills through on the job training with the use of industrial equipment, and facilities. Bramwell and Wolfe (2010) pointed out that universities have emerged as central actors in the knowledge based economy since they are increasingly viewed as key drivers of creativity and innovation and major agents of economic growth. The purpose of this collaboration among other things is to identify higher order skills needed by students for success in school and in the work place after graduation so as to inculcate same in the students.

According to Homma and Attalage (2008), another possibility through industry/university collaboration is the creation of opportunities in the productive sector. The essence of this collaboration is to enhance competence in order to tackle social and economic problems such as job creation and un-employment reduction.

Small and medium industries represent the spinal cord of the economy of any nation (Ramadan, 2011). Small and Medium industries have contributed reasonably towards employment, gross domestic product (GDP) and sustainable development of nations. Small scale industries have also contributed to income generation, increased productivity, encouraged the utilization of Local resources, development of technologies and provision of domestic linkages for rapid industrialization (Obitayo, 2005). Industries are found in different areas of economic life such as manufacturing, wholesaling, retailing and services. It is a fact that the SMEs stimulate indigenous entrepreneurship, enhance greater employment opportunities, reduce rural-urban migration, increase the standard of living of average Nigerians as well as promote the development of local technology (Ayozie and Latinwo, 2010). Through the businesses/industries and higher education collaboration, the industries receive qualified human resources such as researchers or students, get access to technology and knowledge, and having the opportunities of using research



infrastructure (Ankrah & Al-Tabbaa, 2015). In the operations of small and medium scale industries, the environment is very important. Generally, there are urban and rural locations in Bayelsa State. According to Chanthima (2010), entrepreneurs are highly influenced by the environment of their operations. The environmental factors that can influence and motivate their decision-making processes include; socio-psychological factors, culture, religion, personality and family.

The interaction or linkage between businesses/industries and universities is very weak in Africa including Nigeria and do not produce the skill assets needed for industrial productivity leading to low absorption level by available industries. Thus, there is a mismatch between industry needs and university output. Adejimola and Olufunmilayo (2009) reported in their work that about 80% of the graduates find it difficult to get employment. Despite this observation, much has not been done in trying to bring collaboration between entrepreneurs in the industry and the universities institutions. Collaboration brings an assurance of good knowledge transfer activities between industry and institution (Salimaki, 2011), opens the door to teaching, learning and employability opportunities with industry and faculties understand the expectations of industry workforce development (Abhijet, 2014). Adeyemo (2011) revealed that the problem of graduate un-employment is traceable to the disequilibrium between labour market requirements and lack of essential employable skills on the part of Nigerian graduates. The graduates are not employable due to gaps in industry.

Research Question

The following research question guided the study.

1. What are the business/industry and university collaborative activities that enhance quality graduates for industrial productivity?

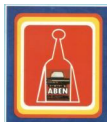
Hypothesis

The following null hypothesis was tested at 0.05 level of significance.

H₀₁: There is no significant difference in the mean responses of urban and rural SMEs operators regarding business/industry and university collaborations that enhance quality graduates for industrial productivity.

Method

The study adopted survey research design because the study relied on the use of questionnaire to elicit the opinions of respondents. The study was carried out in



Bayelsa State. The population comprised 162 registered SMEs operators. The entire population was studied because of its manageable size. Thus, there was no sampling. The instrument for data collection was a validated questionnaire structured on a four-point rating scale of Strongly Agreed (SD), Agree (A), Disagree (D) and Strongly Disagree (SD). The reliability of the instrument was through a pilot test and data collected analyzed using Cronbach alpha which gave internal consistency of 0.69. Out of the 162 copies of the questionnaire administered to the respondents by the researcher and four research assistants, total of 155 copies (representing 95.7%) were correctly filled and used for data analysis. The data obtained were analyzed using mean scores and standard deviation to answer the research question while t-test statistics was used to test the hypothesis at 0.05 level of significance. The item-by-item decision relative to the questionnaire items was based on the real limit of numbers. Any item with a mean of 2.50 and above was accepted as enhance quality while any item with mean less than 2.50 was not regarded as enhance quality. The null hypothesis will be accepted when the t-calculated value is less than the t-critical value and/or will be rejected when the t-calculated value is equal or greater than the t-critical value.

Results

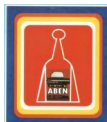
Research Question

What are the businesses/industry and university collaborative activities that enhance quality graduates for industrial productivity?

Table 1: Mean Ratings of the Responses of Respondents on Business/Industrial and University Collaborative Activities that Enhance Quality Graduates for Industrial Productivity (n = 155)

S/N	Collaborative activities	\bar{x}	SD	Remarks
1.	The creation of opportunities for students attachment	3.33	0.48	EQ
2.	The establishment of students corporate placement	3.56	0.58	EQ
3.	The provision for students' research project	3.67	0.47	EQ
4.	The introduction of knowledge transfer	3.64	0.52	EQ
5.	The access to technology	3.65	0.47	EQ
6.	Provision of expensive research infrastructure	3.35	0.54	EQ
7.	Provision of industrial innovation	3.37	0.49	EQ
8.	Availability of personnel mobility	3.68	0.46	EQ
9.	Availability of cross training	3.40	0.60	EQ
10.	Adult continuing education	3.65	0.52	EQ
11.	Co-operative work study programme	3.58	0.53	EQ
12.	Provision of fund	3.29	0.70	EQ
	Grand mean	3.51	0.53	EQ

Note: \bar{x} = mean, EQ = enhance quality, NEQ = not enhance quality



Data in Table 1 show that all the twelve items achieved the real limit number of 2.50 and above. This indicates that the respondents agreed that businesses/industry and higher education enhance quality graduates in Bayelsa State as perceived by the SMEs operators. The standard deviation of the twelve items range between 0.46 to 0.70. This indicates that the responses of the respondents are close to one another.

Hypothesis Testing

The null hypothesis was tested at 0.05 level of significance using t-test statistics.

H₀₁: There is no significant difference in the mean response of urban and rural SMEs operators regarding businesses/industry and university collaboration that enhance quality graduates for industrial productivity.

Table 2: *t-test Summary on the mean ratings of urban and rural SMES Operators regarding businesses/industry and university collaborations that enhance quality graduates for industrial productivity.*

S/N	No	\bar{x}	SD	t-cal	t-crit	Level of Sign	Remark
Urban	61	3.55	0.48	0.40	1.96	0.05	Accepted
Rural	94	3.46	0.52				

Data in Table 2 reveal that at 0.05 level of significance, the t-calculated is less than t-critical. The hypothesis therefore is accepted. This implies that, there is no significant difference in the mean responses of urban and rural SMEs operators regarding businesses/industry and university collaboration that enhances quality graduates for industrial productivity.

Discussion of Findings

The findings of the study revealed that various activities of businesses/industries and university collaborations enhance quality graduates for industrial productivity in Bayelsa State. The findings of the study indicated that businesses/industry and university collaboration have a greater role to play in facilitating the transition from school to the world of work, with a view to exposing graduates the industrial experience, especially in handling equipment and machinery which they are likely to meet after graduation. The findings revealed series of linkages that exist, through which industries engage in institutions in an attempt to facilitate the development of quality graduates that have employability skills. Collaborative efforts strengthen educational process of preparing graduates for employment in industry and related business organizations. The essence of collaboration is to ensure that students acquire the much needed specific occupational training skills, knowledge, attitude,



understanding in order to enhance quality in terms of skill competency, effectiveness and efficiency of graduates in various occupational fields. Ahmed, Abraham and Abdullah (2015) also agreed with the findings of this study where the authors found that business/industry and higher education is a means of contributing quality in teaching and learning for graduates employability skills which is vital to the survival of industry in an increasingly competitive world market.

Conclusion

In conclusion, it is very clear that institutions of higher learning have the responsibility of preparing professional graduates with employable skills capable of expanding labour market demand that can provide a platform for sustainable economic growth. One of the most crucial issues facing both industry and education, is to create a balance between the supply and demand in terms of graduates employability skills for quality that leads to industrial productivity.

Recommendation

Based on the findings of this study, the following recommendations are made.

1. Universities should embark on aggressive drive in partnering with industries in a way that will make such industries to fund research in their production lines.
2. Universities can boost the employability profile of their graduates through work related training and solid industrial attachment.
3. There is need to bring in seasoned industrialist to participate in drawing up the curriculum of universities and teaching some practical courses on part time basis in Nigeria universities towards producing quality graduates.

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