

## PUBLIC-PRIVATE PARTICIPATION IN FUNDING UNIVERSITIES FOR KNOWLEDGE BUILDING IN ANAMBRA STATE, NIGERIA

Nwafor Benedict Ngozi; Diara Chinwe Faith; Ezeaku Felicia N.  
& Odoh Blessing Chinyere

Department of Educational Foundations, Faculty of Education  
University of Nigeria, Nsukka

---

### Abstract

*This study investigated public-private participation in funding universities for knowledge building in Anambra State, Nigeria. Two research questions guided the study. This study adopted a descriptive survey design. The population for the study comprised all the heads of departments, faculty deans and directors of institutes at the two Federal and State Universities in Anambra State, Nigeria. There are one hundred and eighteen (118) administrative heads in the. The entire population was used as sample since it is manageable. Hence, there was no sampling technique. The instrument used was a self-designed questionnaire tagged 'Public-Private Partnership for the Funding of Universities' Questionnaire (PPPFUQ)'. The instrument was validated by three experts and the reliability test was carried out to determine the internal consistency through Crombach Alpha Statistics, which yielded an index of 0.86. Mean and standard deviation scores were used to answer the research questions. The t-test was used to test the hypotheses at a 0.05 alpha significant level. The findings revealed that, the ways collaborative training programmes can contribute to the funding of universities in Anambra State include: sponsoring the teaching staff in local and international conferences/workshops to accumulate more knowledge on research development; industries assisting staff with grants for the conduct of empirical research to improve their efficiency in research processes; involving staff in workshops regularly to promote knowledge building for research development; creating opportunities for staffs to go on sabbatical leaves; and establishing industrial training/support programmes for students to acquire relevant practical knowledge and skills. Based on the findings, recommendations were made.*

---

**Keywords:** Public-private participation, funding universities, knowledge building

---

### Introduction

Since the recent past, funding of universities in Nigeria has been borne solely by the federal government of Nigeria, through its regulating body, the National Universities Commission (NUC). The reasons for carrying this burden by the federal government are not far-fetched. The federal government had enough money in her coffers to fund the system, especially in the seventies and early eighties to pay academic staff and other personnel as well as provision of both physical facilities that enhance teaching and learning. Furthermore, the government of Nigerian in this period had the capacity to accommodate the demand for places in the universities. However, with the present economic crunch in Nigeria, coupled

with dwindling price of oil in the world market, the government found it difficult to sustain the financial capacity of supporting the system very adequately with funds without the helping hands of other external stakeholders in education. On the part of the universities in Anambra State, it is becoming increasingly difficult for them to do it alone in terms of servicing as citadel of learning coping with the huge wage-bill accruing to them as well as competing with other states due to competitive, economic and other pressures. These have brought about deterioration of conditions of study and teaching in response to financial constraints (Altbach & Davis, 1999). Also academic infrastructures, including libraries and laboratories, have been starved of funds (Altbach, 2006). Today, under this condition, universities in the state are left with no option than to carry their industrial partners along in terms of research and development through the formation of partnerships for mutual benefits. Since the industrial sector is established for profit making and the universities for knowledge enhancement, such partnerships would help in spreading the cost in terms of provision of knowledge and cost of research. However, time has now come for the realization that State and Nigerian government claim not to be buoyant enough to solely provide the funds required for managing the university sector (Nwabueze, 2016). There is a general opinion that the universities in Nigeria are not adequately funded despite government allocation to universities in the country. The reason is that universities have expanded beyond the financial resources at government's disposal. Because of this reason, it is therefore expedient that universities supplement government funding by exploring other sources of funding. This, in essence, calls for involving in funding the university projects and programmes through mutual collaboration.

Public-private collaboration can take various forms and levels of partnerships from contract or sponsored research, to joint research, professional courses, consultancy to creating opportunities for student placements, staff exchange, and joint curriculum development. Public-private linkages are often conceived as a three-way interaction between universities, government, and industries as described in the Triple Helix theory (Etzkowitz, 2008). Today universities are considered not only as centres of knowledge and learning, but as key institutions in national innovation systems (Nelson, 2006). In order to carry out their role within the innovation system, universities need to be well-linked to enterprises, other research institutes, and supported by government policies. There is a growing perception that the knowledge and skills taught to students at Nigerian universities do not meet the requirements of industry and the wider economy. This mismatch, coupled with under-training in the critical skills of problem-solving, analytical thinking and communication is blamed, at least in part, for the emerging high graduate unemployment and under-employment in many parts of the country (Uche, Nwabueze & Ememe, 2009; Pauw, 2008). There is a need to bring together universities with productive sector representatives to update and upgrade curriculum to ensure that graduates possess relevant skills for the workforce development. In addition to the understanding that universities need to produce work-ready graduates with the requisite skills for the job market, it is also increasingly recognized that universities have to play a pivotal role in applying research and innovation to address socio-economic problems and promote innovation for economic growth by forging strategic partnerships with the productive sectors of the economy and national innovation systems (Sebuwufu, Ludwick & Béland, 2012).

Fostering public-private partnerships to enhance commercialization efforts has emerged as a critical imperative to sustaining global competition. In universities in Nigeria, Network Industries like MTN, Glo and Etisalat; oil and gas industries like Mobil, Shell and Total Fina Elf partner with Universities to enhance activities taking place in the institutions for global competitiveness (Ukala, Madumere-Obike & Nwabueze, 2013). These partnerships are done to improve institutional performance through proper assistance in the provision of facilities in the school system and research development. The findings of researches carried out in the institutions are used in the industries for quality productions as well as students produced are employed in these industries to contribute their quota in societal development (Nwabueze, Ezeribe & Patrick, 2023).

The industries provide the universities with necessary funds for the provision of facilities and staff development through training and development programmes (Nwabueze & Onyenandu, 2015). The growing importance of university-industry partnership can be seen in knowledge transfer processes, which has prompted institutional bodies to devise ways to support and encourage collaborations between the universities and industry for global competitiveness (Nwabueze, 2016). These collaborations and partnerships create a medium for effective knowledge transfer channels between the universities and industries for individual and societal development. These processes and collaborations help to build strong system for the universities to carry out their duties efficiently such as management, teaching and research, as well as equip the staff and students with the entrepreneurial skills/innovations needed for the growth of individuals and the society at large. Through partnership with an industry, universities strive to establish new practices and methods for institutions to take advantage of the industrial funding of research which will become increasingly important in the future. This maximum support from the industry through fund provision helps the universities to procure all the materials needed for teaching and learning (Nwabueze & Egenti, 2020). This creates strong channel for knowledge building and skill development. The channels of university-industry interaction are: research support; technology transfer; knowledge transfer; and cooperative research (Santoro, 2000).

Public-private partnership (PPP) therefore can be seen as the interaction between any part of the higher educational system and industry aiming mainly to encourage knowledge and technology exchange (Bekkers, Bodas, & Freitas, 2008; Siegel, Waldman & Link, 2003). The increase in knowledge and technology exchange has been attributed to a combination of pressures on both industry and universities (Giuliani & Arza, 2009). Looking on the side of industry, pressures have included rapid technological change, shorter product life cycles and intense global competition that have radically transformed the current competitive environment for most industries (Clarysseb, Lockett, & Knockaertd, 2008). Public-private partnership however is a type of partnership between universities and industries which facilitates the transfer of knowledge from universities to industries with financial support from the industries. Public-private partnership can come in form of collaborative training programmes. Universities get contributions from industries for training programmes to develop the manpower of the industries. The essence of the training programmes is to create opportunity for exchange of staff and improve their ability to maximally apply innovative technology discovered by universities for improved services. These contributions occur

through grants and contracts from consulting agreements. As pointed out by Altbach (1998), public-private partnership has been a priority for the university. Universities have to engage in a number of special manpower training programmes with industry, as well as many research projects relating to local industrial needs, in which university academic staff frequently act as consultants, with the encouragement of university authorities. By doing this, universities will ultimately gain additional funds to carry on their operations through partnering with industries. Industries can equally donate or lend scientific equipment to researchers in the universities for the conduct of researches. This generosity may be repaid to industries by universities communicating their research results to them. The use of the equipment by universities may gain them access to cutting-edge scientific equipment, which may not always be available in university laboratories; thus enabling university researchers pursue additional lines of research that may contribute to research productivity and additional income for the institutions (Nwabueze, Ezeribe & Patrick, 2023). Public-private partnership therefore is necessary as it aids universities in Anambra State to get the funds needed to carry out various services such as provision of equipment for adequate teaching and learning, carrying out of quality research, improved conditions of service for staff etc. This partnership is necessary as the government and the universities on their own could no longer provide the needed funds necessary for effective running of the Universities. The university as a tertiary institution is the future of every nation. It needs adequate funding to be effective in offering qualitative education to its citizens which in the long run results to nation building.

### **Statement of the Problem**

One of the most key issues in the administration of universities is the question of funding. It is very obvious that universities in Anambra State with its complexities require huge funds for their administrative activities, academic programmes, teaching and research development. Government budgetary allocations to these universities are no longer sufficient to contain their repertoire of undertakings in terms of teaching, research and development. There are no enough funds to run the cost of educational and other service functions such as community engagements. Universities' role in conducting basic research as a logical extension of teaching activities to advance knowledge as well as contributing to the development and assimilation of technology is being hampered by meagre funds from the government. Therefore, what bothers the research is that policies relating to public-private links in funding of universities are not strictly followed; thereby leaving the bulk of university funding on government alone. If this trend is allowed to persist, universities in Anambra State will find it difficult to adapt successfully to the modern world. Therefore, this study will fill the gap created by the non-commitment to promote intensive public-private partnership in the funding of universities in Nigeria.

### **Purpose of the Study**

The aim of the study was to investigate university-industry collaboration in the funding of universities in Anambra State. The specific objectives were to:

1. find out how collaborative training programmes contribute to funding of universities in Anambra State; and

2. determine how donation of scientific equipment by industries to universities contribute to university funding in Anambra State.

### **Research Questions**

The following research questions were answered in the study.

1. In what ways would collaborative training programmes contribute to funding universities in Anambra State?
2. What are the contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State?

### **Hypotheses**

The following hypotheses are tested at a 0.05 level of significance

1. There is no significant difference between the mean rating score of State and federal universities administrative staff on contribution of collaborative training to funding of universities in Anambra State.
2. There is no significant difference between the mean scores of state and federal administrative heads on the contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State.

### **Methodology**

This study adopted a descriptive survey design. The population for the study comprised all the heads of departments, faculty deans and directors of institutes at the two Federal and State Universities in Anambra State, Nigeria. There are one hundred and eighteen (118) administrative heads (Heads of Departments, Directors of Institutes and Deans of Faculties) in the universities in Anambra State, Nigeria. This included 66 administrative heads from federal university and 52 administrative heads in state universities. The entire population was used as sample since it is manageable. Hence, there was no sampling technique. The instrument used was a self-designed questionnaire tagged 'Public-Private Partnership for the Funding of Universities' Questionnaire (PPPFUQ). The instrument was validated by three experts (two from Educational Management, and one from Test & Measurement, all in the Faculty of Education, University of Nigeria, Nsukka). The reliability test was carried out to determine the internal consistency through Crombach Alpha Statistics, which yielded an index of 0.86. Mean and standard deviation scores were used to answer the research questions. The t-test was used to test the hypotheses at a 0.05 alpha significant level.

### **Results**

**Research Question One:** In what ways would collaborative training programmes contribute to funding universities in Anambra State?

**Table 1: Mean and standard deviation scores on the ways collaborative training programmes contribute to funding universities in Anambra State**

S/N	Causes of organizational stress experienced by principals in the administration of secondary schools include:	State (52)		Federal (66)		Decision
		Mean	St.D	Mean	St.D	
1	Sponsoring the teaching staff in local and international conferences/workshops helps them to accumulate more knowledge on research development	3.61	1.16	3.57	1.18	Agreed
2	Staff involvement in conducting empirical research projects guide the industries in production processes	3.42	1.20	3.40	1.20	Agreed
3	Industries assisting staff with grants for the conduct of empirical research improve their efficiency in research processes	3.59	1.17	3.47	1.19	Agreed
4	Staff involvement in workshops regularly promotes knowledge building for research development	3.28	1.23	3.30	1.23	Agreed
5	It promotes their professional skills' development for specific problem-solving both in schools and industries	3.30	1.23	3.20	1.24	Agreed
6	Industries being involved in the creation of job opportunities for graduates after school through collaborative training	3.11	1.26	3.21	1.24	Agreed
7	Industries assisting in the creation of opportunities for students' training (Industrial training scheme)	3.06	1.27	3.08	1.27	Agreed
8	Industries assisting students with scholarships for knowledge building	3.13	1.26	2.90	1.30	Agreed
9	Industries creating opportunities for staffs to go on sabbatical leaves	2.94	1.29	3.14	1.26	Agreed
10	Establishing industrial training/support programmes for students to acquire relevant practical knowledge and skills	3.13	1.26	3.00	1.28	Agreed
<b>Aggregate Mean</b>		<b>3.24</b>	<b>1.23</b>	<b>3.22</b>	<b>1.24</b>	<b>Agreed</b>

Data on Table 1 present the mean and standard deviation scores of federal and state administrative heads on the ways collaborative training programmes can contribute to the funding of universities in Anambra State. Both federal and state administrative heads agreed on the items in the table with high mean scores above the mean criterion of 2.50. The aggregate mean scores of 3.24 with standard deviation of 1.23 for state, and 3.22 with standard deviation of 1.24 for federal administrative heads indicated that the items in the table are the ways collaborative training programmes can contribute to the funding of universities in Anambra State. Therefore, the ways collaborative training programmes can contribute to the funding of universities in Anambra State include: sponsoring the teaching staff in local and international conferences/workshops to accumulate more knowledge on research development; industries assisting staff with grants for the conduct of empirical research to improve their efficiency in research processes; involving staff in conducting empirical

research projects guide the industries in production processes; involving staff in workshops regularly to promote knowledge building for research development; promoting their professional skills for specific problem-solving both in schools and industries; industries being involved in the creation of job opportunities for graduates after schooling through collaborative training; industries assisting in the creation of opportunities for students' training (Industrial training scheme); assisting students with scholarships for knowledge building; creating opportunities for staffs to go on sabbatical leaves; and establishing industrial training/support programmes for students to acquire relevant practical knowledge and skills.

**Research Question Two:** In what ways do the contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State?

**Table 2: Mean and standard deviation scores on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State**

S/N	Contributions of donation of scientific equipment by industries to universities include:	State (52)		Federal (66)		Decision
		Mean	St.D	Mean	St.D	
11	Industries help in the provision of ICT devices in higher institutions to promote instructional effectiveness	3.02	1.28	3.10	1.27	Agreed
12	Assist in the provision of physical resources needed for knowledge production	3.25	1.24	3.21	1.25	Agreed
13	Donation of teaching/research infrastructure for curriculum updates	3.56	1.17	3.60	1.16	Agreed
14	Assisting the institution with funds for the training of required skilled manpower that can handle the scientific equipment	3.50	1.18	3.46	1.19	Agreed
15	Provision of funds to maintain the available scientific equipment	3.40	1.20	3.44	1.19	Agreed
16	Providing the institutions with power supply equipment to use the scientific equipment for academic purposes	3.15	1.25	3.23	1.24	Agreed
17	Construction of modern science laboratories in universities by the industries	3.01	1.28	3.06	1.27	Agreed
18	Installing the modern science laboratories with relevant equipment needed for instructional enhancements	3.04	1.28	2.99	1.29	Agreed
19	Proper maintenance of science laboratories to equip the staff and students with the innovations needed for industrial development	3.14	1.26	3.10	1.27	Agreed
<b>Aggregate Mean</b>		<b>3.23</b>	<b>1.24</b>	<b>3.25</b>	<b>1.23</b>	<b>Agreed</b>

Data on Table 2 present the mean and standard deviation scores of federal and state administrative heads on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State. Both federal and state administrative heads agreed on the items in the table with high mean scores above the mean criterion of 2.50. The aggregate mean scores of 3.23 with standard deviation of 1.24 for state, and 3.25 with standard deviation of 1.23 for federal administrative heads indicated that the items in the table are the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State. Therefore, the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State include: helping in the provision of ICT devices in higher institutions to promote instructional effectiveness, assisting in the provision of physical resources needed for knowledge production, donating teaching/research infrastructure for curriculum updates, assisting the institution with funds for the training of required skilled manpower that can handle the scientific equipment, providing funds to maintain the available scientific equipment, providing the institutions with power supply equipment to use the scientific equipment for academic purposes, constructing modern science laboratories in universities by the industries, installing the modern science laboratories with relevant equipment needed for instructional enhancements, and maintaining the science laboratories to equip the staff and students with the innovations needed for industrial development.

### Test of Hypotheses

**Hypothesis One:** There is no significant difference between the mean rating score of state and federal administrative heads on the contribution of collaborative training to funding of universities in Anambra State.

**Table 3: Summary of t-test analysis on the difference between the mean rating score of state and federal administrative heads on contribution of collaborative training to funding of universities in Anambra State**

Administrative Heads	N	Mean	St.D.	df	t-calculated value	t-critical value	Decision
State	52	3.24	1.23	116	0.063	±2.00	Ho <sub>1</sub>
Federal	66	3.22	1.24				Not Rejected

**N/B:** N = Sample Size, St.D. = Standard Deviation, df = degree of freedom

Data on Table 3 present the summary of t-test analysis on the difference between the mean scores of state and federal administrative heads on the contribution of collaborative training to funding of universities in Anambra State. The t-calculated value of 0.063 is less than the t-critical value of ±2.00 and therefore, was not rejected at a 0.05 alpha significant level. Therefore, no significant difference was found between the mean scores of state and federal administrative heads on the contribution of collaborative training to funding of universities in Anambra State. They agreed that private sector collaborate with public sector in the contribution of collaborative training to funding of universities in Anambra State.



**Hypothesis Two:** There is no significant difference between the mean scores of state and federal administrative heads on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State.

**Table 3: Summary of t-test analysis on the difference between the mean rating score of state and federal administrative heads on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State**

Administrative Heads	N	Mean	St.D.	df	t-calculated value	t-critical value	Decision
State	52	3.23	1.24	116	-0.746	±2.00	Ho <sub>1</sub>
Federal	66	3.25	1.23				Not Rejected

**N/B:** N = Sample Size, St.D. = Standard Deviation, df = degree of freedom

Data on Table 3 present the summary of t-test analysis on the difference between the mean scores of state and federal administrative heads on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State. The t-calculated value of -0.746 is less than the t-critical value of ±2.00 and therefore, was not rejected at a 0.05 alpha significant level. Therefore, no significant difference was found between the mean scores of state and federal administrative heads on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State. They agreed that private sector collaborate with public sector in the contributions of donation of scientific equipment by industries to universities enhance university funding.

### Discussion of findings

The findings of this study revealed that, the ways collaborative training programmes can contribute to the funding of universities in Anambra State include: sponsoring the teaching staff in local and international conferences/workshops to accumulate more knowledge on research development; industries assisting staff with grants for the conduct of empirical research to improve their efficiency in research processes; involving staff in conducting empirical research projects guide the industries in production processes; involving staff in workshops regularly to promote knowledge building for research development; and promoting their professional skills for specific problem-solving both in schools and industries. Also included are industries being involved in the creation of job opportunities for graduates after schooling through collaborative training; industries assisting in the creation of opportunities for students' training (Industrial training scheme); assisting students with scholarships for knowledge building; creating opportunities for staffs to go on sabbatical leaves; and establishing industrial training/support programmes for students to acquire relevant practical knowledge and skills. The test of hypothesis one had shown that, there is no significant difference was found between the mean scores of state and federal administrative heads on the contribution of collaborative training to funding of universities in Anambra State. They agreed that private sector collaborate with public sector in the contribution of

collaborative training to funding of universities in Anambra State. The findings are in line with that of Nwabueze and Egenti (2020) that universities get contributions from industries for training programmes to develop the manpower of the industries. The essence of the training programmes is to create opportunity for exchange of staff and improve their ability to maximally apply innovative technology discovered by universities for improved services. These contributions occur through grants and contracts from consulting agreements.

The findings of this study also revealed that, the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State include: helping in the provision of ICT devices in higher institutions to promote instructional effectiveness, assisting in the provision of physical resources needed for knowledge production, donating teaching/research infrastructure for curriculum updates, assisting the institution with funds for the training of required skilled manpower that can handle the scientific equipment, and providing funds to maintain the available scientific equipment. Also included are providing the institutions with power supply equipment to use the scientific equipment for academic purposes, constructing modern science laboratories in universities by the industries, installing the modern science laboratories with relevant equipment needed for instructional enhancements, and maintaining the science laboratories to equip the staff and students with the innovations needed for industrial development. The test of hypothesis had shown that, there is no significant difference was found between the mean scores of state and federal administrative heads on the ways contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State. They agreed that private sector collaborate with public sector in the contributions of donation of scientific equipment by industries to universities enhance university funding. In line with the findings, Nwabueze, Ezeribe and Patrick (2023) had shown that the use of the equipment by universities may gain them access to cutting-edge scientific equipment, which may not always be available in university laboratories; thus enabling university researchers pursue additional lines of research that may contribute to research productivity and additional income for the institutions.

### **Conclusion**

The study had shown that collaborative training programmes contribute to the funding of universities in Anambra State. This implies that, there is need for public-private partnership for staff and students' training programmes contribute to the management of funds in universities. The study had equally shown that, contributions of donation of scientific equipment by industries to universities enhance university funding in Anambra State.

### **Recommendations**

Based on the findings, recommendations were made.

1. There is need for public-private partnership to enable the existence of collaborative training programmes universities.
2. There is need for public-private partnership to enable industry contribute to the donation of scientific equipment to enhance university funding.

## References

- Altbach, M. T. (1998). *Managing the flow of technology*. Oxford: MIT Press.
- Altbach, P. G. (2006). Globalization and the university: Myths and realities in an unequal world. In National Education Association (Ed.), *The NEA 2005 almanac of higher education* (pp. 63-74). Washington, DC: National Education Association.
- Altbach, P.G. & Davis, R. N. (1999). Knowledge and education as international commodities. *International Higher Education*, 28, 2-5.
- Bekkers, R., Bodas&Freitas, I. (2008). Analysing knowledge transfer channels between universities and industry: To what degree do sectors also matter? *Research Policy*, 37, 1837—1853.
- Clarysse, B., Bruneel, J. and Wright, M. (2007a). Growth Strategies of Young, Technology-Based Firms. Paper presented at the Babson Entrepreneurship Conference, Madrid.
- Clarysse, B., Wright, M., Lockett, A., Mustar, P. and Knockaert, M. (2007b). ‘Academic spin-offs, formal technology transfer and capital raising’. *Industrial and Corporate Change*, 16, 609–40.
- Clarysse, B., Bruneel, J. and Wright, M. (2007a). Growth Strategies of Young, Technology-Based Firms. Paper presented at the Babson Entrepreneurship Conference, Madrid.
- Etzkowitz, H. (2008). *The Triple Helix: University-industry-government innovation in action*. London: Routledge.
- Giuliani, E., &Arza, V. (2009). What drives the formation of ‘valuable’ university-industry linkages? Insights from the wine industry. *Research Policy*, 38, 906-921.
- Nelson, R. R. (2006). *National Innovation Systems: A comparative analysis*. New York: Oxford University Press.
- Nwabueze, A. I., Ezeribe, S. N. Patrick, C. P. (2023). Industrial involvement in institutional research building as a predictor of university growth and sustainability in South East, Nigeria. *Review of Education*, 35(1), 45-58.
- Nwabueze, A. I. &Egenti, N. T. (2020). Teachers’ capacity building needs on entrepreneurship education for increased productivity in secondary schools in Abia State. *Review of Education*, 32(2), 332-343.
- Nwabueze, A. I. (2016). Resources in education. In J.M. Ebong, J. D. Asodike& N. J. Izuagba (Eds.) *Economics of Education: Expository Issues* (p. 186-205). Port Harcourt: EagleLithograph Publishers.
- Nwabueze, A.I. &Onyenandu, N.A. (2015). The Influence of Staff Professional Development Programmes on University Delivery System in Abia State. *Journal of Education in Developing Area (JEDA)*. 23(1), 289-302.
- Pauw, D. (2008). *Human resources and recruitment manager for international healthcare*. Johannesburg Area: University of Pretoria Press.
- Santoro, M. D. (2000). The institutionalization of knowledge transfer activities within industry-university collaborative ventures. *Journal of Engineering and Technology Management*, 17, 299-319.

- Sebuwufu, J., Ludwick, T. and Béland, M. (2012). *Strengthening University-Industry Linkages in Africa: A Study of Institutional Capacities and Gaps*. Association of African Universities (AAU), Accra-North Ghana. Accessed from <http://www.aucc.ca/wp-content/uploads/2011/07/aau-case-study-university-industry-linkages-africa.pdf>.
- Siegel, D., Waldman, D., & Link, A. (2003a). Assessing the impact of organizational practices on the relative productivity of university technology transfer offices: An exploratory study. *Research Policy*, 32, 27-48.
- Siegel, D. S., Waldman, D. A., Atwater, L. and Link, A. N. (2003c). 'Commercial knowledge transfers from universities to firms: improving the effectiveness of university-industry collaboration. *Journal of High Technology Management Research*, 14, 111–33.
- Uche, C.M., Nwabueze, A.I. & Ememe O.N. (2009). Developing Entrepreneurial Skills among University Students: A Tool for Attaining Millennium Development Goals in South-South States of Nigeria. *African Journal of Educational Research and Development (AJERD)*, 3(2), 54-64.
- Ukala, C.C., Madumere-Obike, C.U. & Nwabueze, A.I. (2013). Higher Institution Collaboration with Companies for the Development of Middle Level Manpower Skills in South-South, Nigeria. *International Journal of Education, Research and Development, Seville Spain*. ISBN: 9788461638475, 7007-7015.