

Applying Population Data in Educational Policy-Making for Nigeria's Development

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Abstract

Policy-making is applied in education towards guiding the system to achieve sustainable goals. When educational policies are made without recourse to demographic data, then the result is educational maladministration with adverse effects on current and potential learners, as well as, on developmental activities. Moreover, there are long term implications for directing the course of education towards sustainable national development. It is, therefore, not a surprise that developed countries are careful in making sure that educational policies are guided by reliable and valued data. However, developing countries, Meanwhile, many emerging states, including Nigeria, are trailing developed countries in the use of demographic data for policy-making particularly in the human capital development. Therefore, the objective of the paper is to explore the Nigerian demographic context and the developmental benefits achievable from applying data to educational policy-making. The paper adopts the theory of public choice with ex-post facto design and finds that policies on education are hardly based on data. The study revealed that educational policies have not delivered anticipated developmental goals. Furthermore, the study finds that public and private schools are established randomly without regard to urbanization trends. Moreover, education policy implementation has been ineffective in Nigeria because operational guidelines are unreliable. The paper recommends inclusive educational policy-making and implementation that incorporates population growth and urbanization towards providing equitable quality education - Sustainable Development Goal 4 (SDG-4).

Keywords: *Education, Data, policy, Population, Sustainable Development Goal (SGD)*

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Background to the Study

One of the hallmarks of Sustainable Development Goals (SDGs) is education, which is the bedrock of sociological and political-economic advancement of a country. Education serves as a catalyst both for individual self-actualization, economic growth and national development. The relevance of education is that it facilitates the process of meeting individual and societal needs in consonance with the changing environmental scenario. Sound education leads to new demonstration of integrity, virtue, hard work, and sustained economic growth. Good education base could transform a country from a low per capita income to a high per capita level and from a low human development index to a very high development index. Conceptually, education may be defined as “*the process by which an individual acquires the many physical and social capabilities demanded of him by the group into which he is born and within which he must function*” [1]. In addition, Orobosa [2] has defined it as an active agent for changing society that is of great value. To the Nigerian Government at the federal level, Education is considered an excellent instrument for effecting development in the nation [3].

Education brings changes in demographic dynamics in a society, offers opportunities for the empowerment of individuals and groups leading to human development. It is an essential instrument for transforming and sustainably developing a country. A robust learning system is the fulcrum around which human capital development revolves and it is key for the empowerment of young persons and technological innovation.

Policy is a plan of action agreed, chosen or adopted by government for a particular issue; or a formalized set of procedures designed to guide behavior. On one hand, policy-making is the mechanism through which government's social, economic, political visions are transformed into implementable programs. It is evidence that for a policy to be effective it must be based on facts and facts set standards/benchmarks for evaluation which nurtures policies. Machin and Vignoles [4] assert that deficiency in educational policy-making is the reason for inequalities in societies and decline academic standards.

Development is a multifaceted concept that involves changes in culture, attitudes, institutions and faster rate of economic growth which results in poverty reduction and better distribution of income among the citizenry. Development today includes a whole range of changes through which a social ecosystem progresses from a lower condition of life to a better situation from the spiritual and material perspectives. [5]. A nation is developing when its output is growing faster than its population is increasing. Development implies the ability of a nation to expand its output at a rate faster than the growth rate of its population. This is facilitated through high level of educational sector driven by continual human capital development and technological capacity through research and development.

Effective planning based on data drives the success of an educational system. In fact, there is no substitute for research-based information because it influences decisions, which in turn determine development. The need for demographic-based policy making

in the nation's educational sector is urgent with the information and communications technology Megatrends - connecting the world into a global village. The inconsistencies observed in most educational sector decisions might make one infer that these decisions were based on incomplete information, intuition or rule of the thumb. Planning of education is facilitated by robust data input which are useful for trend analysis towards improved policy-making and better impact. Discovery of where gaps are in education or where we need to concentrate more energy are all product of use and evaluation of data. Unfortunately, Nigeria's education system is in dire need of data-based policy formulation that will restore the ailing system. Policy-making in education based on data, will ensure better returns on educational investment and stimulate economic growth and national development.

To a large extent, the level of success achieved by an organization or society is dependent on how it manages its human resources. Over the last thirty-five years, declining standard of education has been observed due to contributory negligence of various stakeholders. However, the arrow head of this misfortune may be traced to the chronic and inconsistent policy devoid of informed data use in deriving policies. Data is the grave instrument in deriving effective policy and without data educational policy and management will be mere experimental. It is difficult to fail with facts. Incidentally, Nigeria's educational sector is in a very big confusion, without effective planning and implementation of its strategies leading to non-realization of the developmental dividend of education.

This paper aims to examine if educational policies are based on data as this will manifests in greater improvement in the educational sector; and to examine the factors militating against access or use of data in policy making decisions.

An Overview of Nigeria's Philosophical Foundation of Education

The philosophy of love for education underlies the 1979 Constitution of the Federal Republic of Nigeria. In Chapter 11, Section 18, the following objectives are highlighted to ensure:

- i) Equal and adequate educational opportunities for all at all levels of the educational system
- ii) Promotion of science and technology
- iii) Eradication of illiteracy through the provision of free compulsory universal primary education, and free university education, and free adult literacy program

Christian Missionaries introduced Western education into Nigeria beginning from the coastal cities, Lagos and Calabar. Later colonial masters established additional schools, but due to the predominance of Islam in Northern Nigeria Western-style education was not prominent there. Rather Islamic schools were in place as they preferred Islamic education. There were two post-secondary institutions before Nigeria gained independence - University College, Ibadan and Yaba Higher College which were established in 1948 and 1934 respectively). University College, Ibadan which was affiliated to University of London became autonomous in 1962 [43]. Subsequently, the

Federal government of Nigeria established other higher education institutions in many State capital cities. By the 1990s the number of institutions increased, and the list went on till the Federal Government approved 9 new private universities in May 2015 and even in November 2016, a new set of 8 universities was approved. While the estimated enrollment in all these institutions including primary schools, secondary schools and tertiary institutions keep rising, the facilities and infrastructure keep going down. The 1981 National Policy on Education in Nigeria indicates that the educational system is structured into three stages namely: primary education is for six years; secondary education is for 5 – 7 years; and tertiary education is from 4 to 6 years. Four years later the policy was broadened to 6-3-3-4 model and subsequently changed to 9-3-4 system in 2004. According to UNESCO [6]

Nigeria's education reform of 2006 shifted focus to entrepreneurship and skill training and realignment of curricula to meet emerging need of a global economy and knowledge society.

It is apparent that unavailability of data for decision-making and inconsistent policy change has contributed to the poor quality of educational services and outcomes in Nigeria. Arguably, this was worsened by the different military regimes that governed the country between 1983 and 1999. Furthermore, the sudden transition in government implied successors jettisoned the policy works of their predecessors leading to gross incongruous educational policies, and in most cases decisions were based on unreliable and old census figures or projections. With such level of instability, the end products at all levels lacked quality and required skills needed to make innovative impact. Despite efforts by federal government, donor agencies and non-governmental organizations in this sector, wide disparity persists in educational standards and learning achievements with a rising surge of mediocrity which threatens every aspect of development.

Moreover, the targets of various education policies have been missed. For instance, the target of achieving gender equality in primary and secondary schools by the year 2005 – tagged Education for All (EFA) – as well as, Millennium Development Goal 2 by 2015 were not achieved. More so there has been no transformative invention over the years by the tertiary institutions rather employers are complaining that Nigerian graduates are lacking in industrial skills needed for higher productivity. The national mass literacy campaign and Open University of Nigeria were established in 1980 and 1982 respectively towards enhancing access to education. In 1986, the Babangida's administration introduced an economic restructuring program resulting in various changes within higher education institutions including proliferation of satellite campuses. In addition, more licenses for private schools at all levels have been granted since then - perhaps due to politics rather than demographic, socio-economic and development needs.

The problems facing educational institutions in Nigeria affect its economy and developmental activities. It is arguable that the problems inherent in Nigeria are reflections of the level of literacy, enlightenment and human resource management. This assertion follows from the fact that the nation's education health has been recklessly

handled and neglected for long resulting in further societal decadence. (Krueger and Lindhal, [7]; Dike, [8]). Nigeria's policies are not evidence-based but they are hastily conceived without data and poorly implemented leading to no impact on the citizenry. Nwagwu [9] noted that Nigeria jumps “*from one education policy to another in utter confusion and apparent mindlessness and hence we often cannot even wait to see to the maturation and effectiveness of one policy before we abandon it for a new one projected and hailed as the panacea of not only the problems of the educational system but also of the ills of the society itself.*”

The need, therefore, exists for better understanding of policy-making and implementation based on demographic data and current statistics. Even the reforms to higher education can only improve quality if it is done through informed policy decision born out of reliable data. Research based policy/decision-making is most impactful in transforming the educational landscape for realization of the socio-economic development that quality education attracts. The whole setting has been mismanaged, misguided policy choices, poor governance, poorly trained university graduates, high level of unemployment, antisocial behaviors and lots of other vices. The educational landscape of Nigeria has undergone many stages since independence due to several inconsistent changes and non-data use in policy and program frameworks.

Educational Policies and Programs after Independence

Presented in this sub-section are some educational policies and programs established by the federal government of Nigeria – unfortunately, the expected objectives have not been achieved. Lawal [10] posits that the “*Nigerian policy on education had gone through many stages and changes to the extent that, policy incoherence had negatively affected the success of the policies*”. The three stages of the education policy are primary school education (6 years), post primary school education (5 to 7 years) and third stage being tertiary education (4 to 6 years). In 2006, the educational sector reform turned attention towards entrepreneurial skills and benchmarking curricula with emerging global needs [5]. In this regard, the 6-3-3-4 four-level structure of education was modified to 9-3-4 such that the first nine years will be compulsory and themed *Universal Basic Education (UBE)*. Thereafter, it becomes voluntary to undertake post-primary and tertiary education. It is notable that Universal Primary Education (UPE) program which was initiated in 1976 by a military regime was eventually abandoned mid-way and subsequently repackaged by as UBE in 2006. Interestingly the same person – Olusegun Obasanjo – was military leader in 1976 and civilian president in 2006 when both UPE and UBE were introduced. The UBE has had several challenges and is not fulfilling its objectives. Other policies and programs that brought about low-quality output of Nigeria's educational system are government takeover of Christian missionary schools in 1970; discriminatory policies of State governments after new states were created; discriminatory policies and quota system on entry requirements for admission to schools at all levels, as well as, catchment policy. Furthermore, the discriminatory policies and practices of both Federal and State governments on establishment of institutions particularly tertiary institutions without ascertaining the enabling facilities also led to the ineffective nature of Nigeria's educational sector.

Essence of Data Use in Educational Decision Making and Planning

Data-based policy making ensures accountability in the management of education. Poor planning and lack of data for policy decision-making is predominant in the educational sector and empirical information/ reports are rare. Meanwhile, Adeyemi and Oguntimehin [14] argue that Nigeria lacks adequate manpower with prerequisite skills to undertake educational planning and as such the relevant government ministries and agencies are either understaffed or have inexperienced staff. Moreover, some of the public servants in the planning units are untrained in statistics, unskilled in data generation and evidence-based policy-making. Consequently, collated data and demographic information gathered from different sources are rarely used to evaluate the country education context for robust planning and policy reform. Akinwumiju [15] posits that “*evaluation is the process of delineating, obtaining and providing useful information for judging among decision alternatives*”.

According to Ajayi [16], the unavailability of correct data and current census has rendered most educational planning and policy-making endeavours in Nigeria unproductive. Existing literature indicate that relying on data to plan results in increased enrolment of pupils in school, improved performance of students a higher academic achievements. [17], [18]. This vital nature of planning based on empirical and demographic data is acknowledged in Nigeria's education policy and it states that “*the success of education is hinged on proper planning, efficient administration and adequate planning*” (The National Policy on Education, [19]). Furthermore, Williams [20] assert that there are multiple ways that decision-makers and policy makers can use monitoring data. For instance, data is useful for problem identification, basis for proffering solutions, assessing and evaluating the effectiveness of existing interventions, generating new ideas to change policy or modify practice and help administrators/teachers to reduce inequities.

Timely and reliable data are fundamental to planning and management in education especially in monitoring educational developments. According to ESSPIN [21], there is currently a lack of timely, reliable data on basic education on which to effect basic decisions at all levels in the system. Kazeem and Olusola [22] have argued that because the education system in Nigeria is of low quality, poor standard, lacking in depth with limited reach, it is unsustainable. Some educational institutions exist because of legislative fiat without considering the source of funding, planning of the physical structure/location, mechanism for quality control and staff requirement. There are instances when Universities had to start in premises that seemed like primary or secondary compounds due to the urgency of using a government approved license [23] – as Olaniyan [24] evidenced “*that demand for university education has been growing faster than the available resources*”.

Good education and sound economy are products of data-based policy leading to better decision making. In the 1990s, Hughes [25] observed that data have become a factor of production equal to land, labor and capital. Stressing the veritable nature of education,

Awopegba [26] proposes that Nigeria should focus on development of human capital through deliberate strategic interactions by employers of labour, planners, human resource managers for the countries socio-economic development. Within the right environment, education is essential for inclusive growth and sustainable development because it is beneficial to society from different perspective. For example, an enlightened and well-educated work force will take on higher-level roles, adding significantly more value to GDP. Nwagwu [9] observed that Nigeria's policies are not based on data, they are hastily conceived and poorly implemented leading to no impact.

Aladekomo [27] highlighted the great concern associated with that policy incoherence – more so with significant decline in standards of both formal and informal education as captured by Ukeje [28] and agreed by Afolabi [29] asserting that, *“the quality of education determines the quality of the products of its education system and by extension the quality and quantity, pace and level of its development”*. There has been mismanagement and misguided policy choices in Nigeria's educational sector. For instance, there is no clear responsibility in the running of the sector as there exists conflict between the Federal, State and Local Government, prevalence of multiple system of education; unstable curriculum and curricular to match industrial needs, national manpower needs; politicization of education among others.

Scholars suggest that when decision-making and policy formulation for education are guided by data (especially demography) it could result in better student performance [30]; [31]; [32]. In same line, Earl and Katz [33] stated *“that when school educators become knowledgeable about data use, they can more effectively review their existing capacities, identify weaknesses and better chart plans for improvement”*. This has not materialized in Nigeria because change in education policies have failed to reform the system due to different militating factors peculiar to the country [34]. Moreover, policies cannot be hastily abandoned and/or modified rapidly by political leaders for selfish gains without negative consequences on the country [35]. One could argue further that although relying on data and demography to plan is necessary, it is not insufficient alone without the capacity and sincerity to plan with the facts inherent in the statistics. Whatever the case, vital academic records and statistics have to be stored, collated, computed over a period for effective planning and sustainable administration an educational system [36].

Methods and theorizing population data use in educational policy-making

The methodological approach to this paper is based on reviews of published multiple documents to draw up statistical profile of the situation of use or non-use. According to Mkpa [37], the *“greatest administrative obstacles to achieving the set goals of the National Policy on Education have arisen from the use of inadequate or unreliable data in making major policy decisions by various Governments”*. When policy is formulated based on dodgy demographic data, the outcome could be effective education policy that cannot be implemented. In order to comprehend the role of data-based policy making, it is necessary to examine existing theoretical framework for making education policy. Amongst the various framework for analyzing demographic inequality four perspectives

relevant to the paper were described. For this paper, public choice theory was used as an explanatory tool along with secondary data. Propounded by James Buchanan and Gordon Tullock, *“Public Choice Theory is a body of theory which explains how public decisions are made. It involves the interaction of the voting public, the politicians, the bureaucracy and political action committees.”* The general theoretical tread that runs through is inefficient bureaucracy due to asymmetry of information inherent in principal-agent relationships. Consequently, it is challenging to control bureaucratic systems to effectively deliver public services. It has been argued that *“if a bureaucracy can offer an all or nothing choice with respect to its services, it can grow to the point where most of the consumer surplus from those services can be extracted”*. In effect, *public choice analysis has roots in positive analysis (“what is”) but is often used for normative purposes (“what ought to be”) in order to identify a problem or suggest improvements to constitutional rules* [11]; [12]; and [13].

Nigeria's Scenario

Education is a symbol of development, a channel to prepare learners and teachers to acquire the skills, capacities and potentialities to offer solutions to the myriads of challenges facing mankind particularly in African continent including Nigeria. The socio-economic and developmental indicators of Nigeria, (Table 1) show a worrisome concern. Among all the indicators considered, Nigeria is lagging behind and belongs to the low human development index countries with a human development index value of 0.514 and ranked 152th position out of 188 countries (UNDP Human Development Report [38]). Other indicators manifested similar adverse situation. For instance, Nigeria has a high population growth rate of 2.8, an unemployment rate of 23.9 and perception of individual well-being of 40. According to the UN *“the percentage of people aged 15 and above who can read and write a short statement on their everyday life is termed the adult literacy rate”* and it is 51.1%. The enrolment ratio of the primary school is 85 percent, secondary education has been reduced to almost half (44%) and enrolment at the tertiary level account for an insignificant low proportion (10%). The poverty level is very high in Nigeria as the population living below income Poverty line (% PPP\$ 1.25 a day) is 62. The Federal Government Expenditure (% of GDP) accounts for the N311.125b (CBN, [39]) and the GDP per Capita 2011 PPP\$ is 5.423. Research and Development Expenditure (% of GDP) is ridiculously low (0.2).

However, Gross Domestic Expenditure on Research and Development, Scientific Publication in leading World Journals and Patents Contribution has no budget. The basis for technological change is the scientific discovery and invention. This is measured by the research and discovery, patents and publications in scientific outlets which not only reflect their overall impact on wellbeing of the masses but also the quality of learning at tertiary level. A nation's development pace is undoubtedly tied to the quality of its education. Incidentally, there is no support in these area and the dividends of education have not been achieved.

Table 1: Nigeria's Status of Educational and Related Indicators-of-quality-of-life

S/n	Indicators	Rate
1.	Adult Literacy Rate(% ages 15 and older)	51.1%
2.	Gross Enrolment Ratio – Primary	85
3.	Gross Enrolment Ratio – Secondary	44
4.	Gross Enrolment Ratio – Tertiary	10
5.	Federal Government Expenditure (% of GDP).	N311.12b
7.	GDP Per Capita [GDP per Capita 2011 PPP\$]	5.423
8.	Population Growth Rate	2.8
9.	Research and Development Expenditure (% of GDP)	0.2
10.	Gross Domestic Expenditure on Research and Development	Nil
11.	Scientific Publication in leading World Journals	Nil
12.	Patents Contribution	Nil
13.	Population living below income Poverty line (% PPP\$ 1.25 a day)	62.0
14.	Perception of individual Well-being (% Standard of Living)	40
15.	Unemployment	23.9
16.	Human Development Index value	0.514

Source: Human Development Report, 2015; Central Bank of Nigeria, 2014

Sources of Data and Use of Data in Policy-Making in Nigeria's Educational Sector

Data for Nigeria's educational policies are from census data the National Population Commission; National Bureau of Statistics (NBS); and Federal Ministry of Education. These sources may not be having reliable demographic data essentially needed for decision making. Data are essential tools for educational decision-making but most of the sources of data available are either extrapolated or based on census data which are not accurate. Without a reliable baseline demographic data, it becomes difficult to plan. Ololube (2013) summed the problem of data in Nigeria's educational planning as follows: *“one of the most difficult challenges that educational planners face is the issues of inaccurate statistical data. The quality of technical planning is in most cases inhibited by statistical deficiencies and inaccurate data. Nigerian education systems have failed to effectively plan because of lack of accurate data, which is because of the use of mediocre to prepare data for use in the planning and forecasting processes”* [40]. The place of planning is highly indispensable in the educational sector of any nation. Furthermore, Ololube notes that *for any educational system to truly develop, effective planning is indispensable as education and planning are essential characteristics for effective education* [41]. In a similar vein, Chapman and Boothrayd [42] revealed that low data quality is a severe problem hindering education data analysis not only in Kwara state but also in most third world nations and even where the data were of good quality the low level of training of school managers in data analysis constitute a hindrance. In fact, many of the changes in educational policies are as a result of poor planning and planning without data.

The problems of data are many, such as corruption, low skilled manpower, unreliable demographic data, non-availability of reliable educational data, politics, multiple and

proliferation of educational policies. Mkpa [37] gave a capsule dose of data challenge suggesting that government's use of unreliable and inadequate data by governments at various levels is one of the most significant obstacles to the achievement of National education policy goals. The study emphasizes that such strategic decisions are generally made on the basis of political whims rather than on logical justification, planning or pilot programs. An instance was when some states introduced a free education program at all levels in 1979. Not too long ago, there was also sudden spurt in the set-up of State universities and polytechnics; all at a time when payment of primary and secondary school teachers was near impossible. These are some of the litany of decisions effected without recourse to informed data base. All the policies and reform programs have not been able to translate into tangible improvement in educational quality; hence, the sector is in dire need of sound and data-based policy that will revamp the ravaged system to meeting its expected return on investment by way of ushering in much desired and needed economic growth and development.

Conclusion

In order to evolve a sustainable educational sector in Nigeria there is need to reorganize our educational system based on the use of data in policy decision-making. Good education is evident by greater knowledge base and skill human capital that enhances graduate employability and job mobility of recipients. In Nigeria, graduate unemployment is high and significant proportion of graduates are said to be unemployable due to low skills and competence gaps in the labor market. Despite all the policy reforms and programmes the educational sector has not achieved the stated objectives. This implies that the fault may not be on policy availability but on the quality and usage of data-based policies. Since policies by different governments and implementing agencies in Nigeria are not evidence-based leading to non-delivery of educational goals of development, the paper recommends that Ministry of Education at three tiers of government set up a reliable data generating usage unit (REDAGUU) manned by skilled personnel. This unit will ensure that data form the basis for policy decision-making in the education sector. In addition, make sure that every policy decision making personnel in education sector tailors their policies and strategies towards informed research-based data for maximizing meaningful developmental growth.

References

- [1] Shewawa (2011). Education and national development in Nigeria. *Newsfavour*. Retrieved from <http://newsflavour.com/world/Africa/education-and-Nation-Development> (last accessed June 19, 2013).
- [2] Orobosa U. (2010). Education and national development in Nigeria. *Vanguard Online* (last accessed May 30, 2013).
- [3] Federal Government of Nigeria (2004). *National policy on education*. Lagos: NERC Press.
- [4] Machin, S. & Vignoles, A. (2006). *Education policy in the United Kingdom*. London: Centre for the Economics of Education. Retrieved from <http://cee.lse.ac.uk/ceedps/ceedp57.pdf>
- [5] Todaro, M, P. & Stephen, C. S. (2009) *Economic development*. Boston: Pearson Education
- [6] UNESCO (2007). Nigeria 10-Year Strategic Plan for Education: Policy, Cost and Financing Assumptions and their Implications. *Working Document ED/EP/2007/PI/1*. Paris: Division of Education Policies and Strategies, UNESCO7.
- [7] Krueger, A. B. & Mikael Lindhal (2001) Education for growth, why and for whom? *Journal of Economic Literature*, 39(4), 101-136.
- [8] Dike, V. E. (2002). The state of Education in Nigeria and the health of the nation. *NESG Economic Indicators*, 8(1).
- [9] Nwagwu, N. A. (1983). Educational Policy Formulation and Implementation in Nigeria: A Crisis of Rationale Creation. Presidential Conference on Nigeria since Independence. Zaria, 27-31 March. Ahmadu Bello University.
- [10] Olawaiye, L. Y. (2013). Education as an instrument for effective national development: which way Nigeria. *Business & Entrepreneurship Journal*, 2(2), 27-38.
- [11] Gordon, T. (1965). *The politics of bureaucracy*. Washington, D.C.: The Public Affairs Press.
- [12] Downs, A. (1967) *Inside bureaucracy*. Boston, MA: Little, Brown
- [13] Niskanen, W. A., Jr. (1971). *Bureaucracy and representative government*. Chicago, IL: Aldine-Atherton.
- [14] Adeyemi, O. B. & Y. A. Oguntimehin, (2000). Nigeria and the problems of planning for quality education. In: Fadipe, J. O. and E. E. Oluchukwu (Eds.), *Educational Planning and Administration in Nigeria in the 21st Century*.
- [15] Akinwumiju, J. A. (1996). Performance evaluation and accountability for quality primary education. In: Ajayi, A. O. & J. A. Akinwumiju (Eds.), *Personnel Performance and Capacity Building*. Ibadan: Department of Educational Management, University of Ibadan.
- [16] Ajayi, T. (1985). Educational planning and national development: The Nigeria experience. 4th Annual Conference of NERA, 2nd - 6th November, UNIBEN.
- [17] Carlson, D., Borman, G. D., & Robinson, M. (2011). A multistate district-level cluster randomized trial of the impact of data-driven reform on reading and mathematics achievement. *Educational Evaluation and Policy Analysis*, 33(3), 378-398.

- [18] Campbell, C., & Levin, B. (2009). Using data to support educational improvement *Educational Assessment, Evaluation and Accountability*, 21, 47-65.
- [19] National Policy on Education (2004). *National policy on education*. (Revised). Lagos: Federal Ministry of Education.
- [20] Williams, J. D. (2004). *Monitoring school performance: A guide for educators*. London: The Falmer Press.
- [21] Education sector support programme in Nigeria (ESSPIN) (2009). Approach to supporting EMIS. *Position Paper Doc. No.: ESSPIN 026*.
- [22] Kazeem, Kolawole and Ige, Olusola (2010) Redressing the Growing Concern of the Education Sector in Nigeria. *Edo Journal of Counselling*, 3(1), 40-49.
- [23] Adesina, S. (2005). *Growth without development: The Nigerian educational experience*. Lagos: Yema Investment Ltd.
- [24] Olaniyan, O. (2001). Public finance and higher education in Nigeria. Proceedings of the 12th General Assembly of the Social Science Academy of Nigeria (SSAN) pp. 101-119.
- [25] Hughes, G.C. (1991). The Information Age. *Information Development*. 7(2), 72.
- [26] Awopegba, P. O. (2001) Human Capital Development in Nigeria: A Socio-Economic Analysis. *Nigerian Journal of Clinical and Counselling Psychology*. 7 (1/2), 157-167.
- [27] Aladekomo F. O. (2004). Nigeria Educational Policy and Entrepreneurship. *Journal of Social Science*, 9(2), 75-83.
- [28] Ukeje, B. O. (1995). Crisis in the Nigeria education system. Unpublished. Nigeria Academy of Education Annual Congress in November 1995, Abuja.
- [29] Afolabi, O.A. (2010). Opening Address at the National Examination Summit at the National Universities Commission (NUC). Abuja, Nigeria.
- [30] Alwin, L. (2002). The will and the way of data use. *School Administrator*, 59(11), 11.
- [31] Doyle, D. P. (2003). Data-driven decision-making: Is it the mantra of the month or does it have staying power? *T.H.E. Journal*, 30(10), 19-21.
- [32] Peterson, J. L. (2007). Learning facts: The brave New world of data-informed instruction. *Education Next*, 1, 36-42.
- [33] Earl, L., & Katz, S. (2006). *Leading schools in a data rich world*. Thousand Oaks, CA: Corwin Press. pp. 17
- [34] Alabi, A. O. and Okemakinde, T., (2010). Effective planning as a factor of educational reform and innovation in Nigeria. *Curr. Res. J. Soc. Sci.*, 2(6): pp.316-321.
- [35] Afolabi, F.O. & Loto, A.B. (2012) "Socio-political vicissitudes and bureaucratic constraints on educational formulation and implementation in Nigeria". In Edo, V.O. and Salami, E. F. K. (eds), *Issues and trends in nigeria's development: A Festschrift for Rev. (Fr.) Abiodun, F.A.* Ibadan: John Achters, Publishers.
- [36] Duze C. O. (2001) Patterns of wastage in primary schools in Delta State of Nigeria (Unpublished Monograph).
- [37] Mkpaa, M. A. (2013). Overview of educational development: Pre-colonial to present day. Retrieved from <http://www.onlinenigeria.com/links/send.asp?blurb=534>

- [38] UNDP (2015). *Work for human development*. New York: UNDP.
- [39] Central Bank of Nigeria (2014). *Statistical Bulletin*. Abuja: CBN
- [40] Ololube, N. P. (2013). The problems and approaches to educational planning in Nigeria: A theoretical observation. *Mediterranean Journal of Social Sciences*, 4(12).
- [41] Ololube, N. P. (2013). *Educational management, planning and supervision: Models for effective implementation*. Owerri: Springfield Publishers
- [42] Chapman, D. W. & Boothrayd, R. A. (1988). Quality in developing countries settings, *Education Review* 32(4), 416-429.
- [43] Materu, P., Obanya, P., & Righetti, P. (2011) The rise, fall, and reemergence of the University of Ibadan, Nigeria in *The Road to Academic Excellence in 195-227*, Ibadan: Ibadan University Press.