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## Harnessing Educational Data for Quality Education and National Development

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**ABSTRACT:** Many researcher, educationist, economist and development theorists accept that the level and quantum of national development possible in any country is to a large extent a reflexion of the said country's education quality. Most educationists also believe that education provides the foundation for national development, the groundwork on which much of our economic and social well-being is built. It is the key to increasing economic efficiency and social consistency. By implication therefore, one of the easiest ways to slow down the developmental growth of any country begins with the lowering of the standard of education in such a country. It is therefore important that our education programmes and policies are dependent on quality information and data to ensure its relevance and contribution to national development. To achieve this, a lot of education relevant information is required in educational planning to ensure quality products that will in turn impact positively on the national economy. Consequent upon such inevitable effects of the quality of the products of an education system on the country's national development agenda, it becomes necessary that the stakeholders in the country's education system should take bold steps to ensure that the education system and programmes are planned on solid accurate, qualitative and verifiable data. This in turn will require a restructuring and redefinition of the roles and responsibilities of officers within the system in order to adapt to a data-driven decision-making culture and to establish and sustain links between the ministry staff with relevant outside institutions. These steps will ensure that education planning and policy pronouncements in Nigeria are data-driven which will in turn ensure that the system produces citizens that will impart positively on the society for quality and rapid national growth and development.

### I. INTRODUCTION

Most, researcher, educationist, economist and development theorists are of the agreement, that the level and quantum of national development possible in any country is to a large extent a reflected the said country's national development (Oziturk, 2001, Psacharopoulos & Patrinos, 2018). Educators also accept that as the education of a country is so is their level and quality of national development. It is commonly accepted that education provides a foundation for development, the groundwork on which much of our economic and social well-being is built. It is the key to increasing economic efficiency and social consistency (Sardareh et al, 2014). By increasing the value and efficiency of their labour, it helps to raise the poor from poverty. It therefore implies that one of the easiest ways to slow down the developmental growth of any country begins with the lowering of the standard of education in such a country(UNESCO,IIEP, 2021). National development on the other hand is about the general improvement of the human and material well being of any nation. It is the process of unfolding the potentials of a people in any nation and harnessing of the human and material resources of the locality to affect the quality of life and livelihood. The human component of national development is therefore a major determinant in the extent and direction of any national development efforts (Ozturk, 2001). The quality of such human element is to a large extent, a reflection of the quality and amount of education within the nation-state. Thus, one of the primary focuses of education in national development is the development of the citizens to impact positively on the society, thereby positively influence national development and nationhood, (NPE, 2016). It is therefore important that our education programmes and policies are dependent on quality information and data to ensure its relevance and contribution to national development. Education policies and programs based on guesstimation and out-of-the-head projections only end up in building sky-scrapers in the air or at best, the achievement of a "malaria induced dream". The availability of educational data in any state determines to a large extent, the degree of success or failure and reality-relevance of any educational policy and program in such a nation.

Educational data-base is generally a library of information (data bank) on the human and material resource available within the education machinery. It also contains data on what has been, what is available and projected possibilities. This makes for quality planning and administration of education that is relevant to the people and to the nation-state. It is generally believed that one of the striking differences between the past successes of the Schools Restoration Programme of the previous regimes in Nigeria and the present attempts at improving school attendance in many parts of Nigeria, especially through the on-going school feeding programme, is data-based planning and administration. In most societies of the world education planning programme/activities are primarily focused on improving the education quality to ensure qualitative national growth and development. To achieve this, a lot of education relevant information is required in educational planning to ensure quality products that will in turn impact positively on the national economy

## **II. HUMAN RELATED EDUCATIONAL DATA**

To build a qualitative educational data-base requires a clear understanding of the types and quality of data to be encoded into such data-bank. The human related data is further distinguished into demographic and achievement and perspective data

**Demographic Data:** This refers to available information of the personnel need-requirements in the education sector, which includes the students, teachers, administrators and policy makers and other stakeholders. General information on the students must provide data on previous enrolments, present enrolments and projected students enrolment based on the capacity of the infrastructure to accommodate and give quality education. It should also indicate the structure/types of programmes and levels of education into which the students are enrolled.

The teacher information is a data on the teacher-strength – past, present and projected, teacher quality – qualification and distribution, teacher engagement – which teachers are employed by who at what levels, and what is the capacity of the schools and employees to retain/engage. This is more or less teachers’ composition and characteristics – sex, age, teaching subjects and rank/responsibilities. The teacher-administrator processes and provides this information on the staff and students and teaching infrastructure to the relevant planning authorities. The teacher component of any educational data-base is so relevant in educational planning and administration that the authenticity of the teacher-data must be taken very seriously. The teacher characteristics are a major determinant on the degree of success or failure of any education policy and programmes. The teacher characteristics do not only influence the outcome of any education system but also the quality and accuracy of data upon which most education plans and programs are based, (Sardareh et al, 2014 & UNESCO, 2014).

Quality educational data-base is also interested in the personnel that are directly involved in the execution, supervision and control of educational policies and programs. Data on education administrators should be able to provide both the structure and organisation of such personnel as well as educational attainments and/or dispositions. This is important because the inanimate component of education – policy and programs, is influenced and given direction by the operators of the system. Education for national development is about people and their society (Ozturk, 2001), and so the end-product/benefactors are also of importance in building a quality educational data-base. Members of the society outside the education system have a stake in what goes on in the system. The government, parents/guardians and employers of labour are the direct beneficiaries of education and should also be contributors – materially and opinion, to education in any nation-state. Educational data on this segment of stakeholder is at most times projectionary. It is not always easy to build a finite data on this group of personnel. At best, their structure and characteristics are determined from the students’ information data-bank, job tracers and government based statistics. Every effort must therefore be made to be as objective as possible in their projection in developing countries like Nigeria where the dearth of mathematical models are high for such projections or minimally developed/accepted.

**Achievement Data:** The class teacher provides the data on the students’ achievement and teaching facilities, which the teacher-administrator processes and provide information on the staff and students and teaching infrastructure. High responsibility is therefore placed on the integrity and personality of the teacher to ensure that the data so provided are accurate and authentic and verifiable. Over the last two to three decades, the students’ achievement data as collected from most of our primary and secondary schools, to a large extent do not closely match the increasing weak performance of our students in their external/national examinations such as Senior School Certificate Examinations(SSCE), National Examination Council(NECO) examinations and Joint Admissions and Matriculation Board (JAMB) examinations into Nigerian tertiary institutions, (UNESCO,21/08/2021). All stakeholders in the education sector in Nigeria should begin to get serious on actionable plans to narrow, (if not eliminate) the harrowing gap between students in-school achievement records

and their performance at external examinations and between the skills claimed by Nigerian graduates from the higher institutions and their job performance in the industries/establishments.

**Perception Data:** The Perception data group is another important component of the non-material information relevant in building an educational data-base that contributes to national development. This component is interested in identifying the society's expectations from education. In other words, what are the cultural value attachments to education within a particular society? If education is about persons and society and is built on human and material interactions, it is therefore important that an educational data-base should provide information (clause) reflecting the effect/influence of the national and local culture of the people as a determinant of the value and utility of education in a state.

**Material Related Data :** In building an educational data-base the material element which usually appears to be easier always turns out to be a Herculean task in view of the enormity of data that would result there from. This group of data is also commonly separated into - program data.

**Programme Data:** Under this data group every relevant pieces of material information for running a qualitative educational programme must clearly itemize available infrastructure – classrooms, utility services, teaching facilities and consumables, text materials and library facilities – showing their present conditions of serviceability. This appears to be one of the key areas that planning or qualitative education in Nigeria is suffering the most, resulting in near-absence/lack of laboratory/workshop based training exercises. To ensure quality every educational material data must also present future estimates/projections on facilities based on projected students' enrolment and teacher retention capacity and funds availability within a given locality. One other very important aspect of this educational material information to be included in the educational data-base is inevitably the budgetary allocations to education from both state and federal agencies and from any other non-governmental agencies. The budgetary data will tell and to a large extent, determine what is possible and direction/focus of implementation of government policies and programs in national education. The creation of the Universal Basic Education Commission in Nigeria (2004) has brought to focus, the relevance of not just administration and monitoring of education policies and programmes, but also the need for data-based planning and success of programmes and also the need to continually update existing educational data-banks. Planning with non-existent or outdated information in any facet of national development is as good as planning to fail from the start.

**Challenges of Educational Data Usage and National Development :** Planning education for national development without qualitative data is as bad as a blind man boxing at a hanging balloon but planning with inaccurate data is as good as toying with fire. Most laudable educational plans and programmes by various administrations in the Nigerian have suffered series of disproportionate completion/outright failures due to inaccurate data or complete absence of reliable data, (UBEC, 2021) Building a qualitative educational databank is a sure step to guaranteeing that government policy pronouncement match available facilities for their implementation and success. The present day Nigeria has grown from the days of complete lack of relevant educational data (an era when educational data were based on projections culled from foreign based-data) to an era of data inadequacies resulting from incorrect previously available data, leading to wrong projections and prefabricated data information. In some cases where previous data were accurate, lack of update or updates have resulted in current inaccurate data to work with. The other scenarios include the prevalence of office-based data projections and politically motivated plotted data. In some instances, available information has been suppressed to cover past inadequacies of administrators both at the ministry and school levels, (Best et al, 2013). In all these instances, the role of the teacher in ensuring the generation, processing and provision of reliable educational data-base remains paramount. The position of educational administrators in the processing, custody and development of educational data-base remains a very important link between the government, the schools and the users of education products and programs.

At a time in Nigeria's development when educational accountability is making serious demands on the schools and the teachers with respect to the students' scores/performance, teachers are under enormous pressure to keep and provide up-to-date educational data from their desks. Accurate educational data will not only rest the argument for/against falling/stable standards of education in Nigeria but will also give impetus and direction that reflect on the national development efforts (UNESCO, 2017). Some of the major challenges in the use of educational data to plan education for quality national growth and development in Nigeria include data unavailability – this has a connection with the level of funding available for the collection and analysis of any such quality data. Secondly, there is also the challenge of data accessibility – sometimes schools fail to do the needful in collecting and processing data for the government and her agencies, or data available with the

ministry officials are made inaccessible to the school administrators/teachers, (Mahlk & Ross, 1990). Issues related to credibility, design, and relevance of data has also remained a daunting challenge as many people involved in the data capturing continues to manipulate the figures for obvious reasons in spite of the Buhari's government out-cry against corruption.

**Educational Data and National Development :** Most education and economic planners believe that national development is first and foremost predicted on the overall well being and standard of living of the peoples. Therefore advanced infrastructure in the midst of poverty and want resulting from ignorance and illiteracy amounts to modern day slavery and exploitation of the majority for the benefit of a few. According to Curties, (in Edwards, 2018), "The sure foundations of the state are laid in knowledge, not in ignorance; and every sneer at education, at culture, at book learning, which is the recorded wisdom of the experience of mankind, is the demagogue's sneer at intelligent liberty, inviting national degeneracy and ruin.". Nation building requires a type of education for the survival and advancement of society that is qualitative, purposeful and relevant. Education as a social structure of the state must therefore be properly planned, administered and made relevant to the people for national development. No nation does better than the citizenry, especially the leadership; no leadership gives what it doesn't have. "When our schools produce a preponderance of mediocres, our leaders turn out to be mediocres". Mediocrity begets mediocrity. Quality education ensures quality products. The quality of our education system is reflected on the quality of the citizens and the quality of our national development efforts mirrors from the quality of the citizens, who are products of the education system. This symbiotic relationship between the citizens, their education and national development portrays the interdependence of these three components of national existence. As the quality and direction of national development is a reflection of the educational characteristics of the people, so is the quality and structure of their education predicted on the data upon which education is planned.

### III. CONCLUSION

This article is clearly an attempt to trace the importance of quality education data-base as one of the major determinants of the quality of education in any society and by implication produce a direct reflection of the citizens on national development. The author concludes that the process and problems of our national development are traceable to the quality of our educational system as determined by the educational data upon which the system runs. In view of the damaging implication of the quality of the products of our education system, the time has come when all the informed stakeholders should take a bold step to ensure that our education system and programmes are planned on solid accurate, qualitative and verifiable data. The issue of data credibility and acceptability can be addressed by involving all relevant stakeholders in the design and implementation of an assessment. The assessment team should have the technical competence to design, administer the assessment and analyze results. Provision should also be made for continues training/re-training of existing and potential staff is necessary to ensure quality and to allow for attrition. Secondly there is every need to build local capacity by establishing effective national, state, zonal and local government coordinating bodies. The success of these bodies will depend on the commitment of government at the different levels to invest substantially in such capacity building that could be costly and time-consuming. It should also be noted here that existing structures, policy-making and decision-making processes within ministries can be a barrier to data use. In order to adapt to a data-driven decision-making culture, ministries of education may need to restructure and redefine the roles and responsibilities within the organization. There would also be the need to establish and sustain links between the ministry staff with relevant outside institutions. These suggestions would go a long way to ensure that education planning and policy pronouncements in Nigeria are data driven which will in turn ensure that the system produces citizens that will impart positively on the society for quality and rapid national growth and development.

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