

EXPLORING THE PANACEAS TO THE CONSEQUENCES OF INADEQUATE DATA TO THE PLANNING OF EDUCATION IN NIGERIA

Ojiemhenkele, Andrew E. (Ph.D)

andrewojies@gmail.com, +2348060784954

&

Ofangbonmu, Unity

unityofangbonmu@aauekpoma.edu.ng, +2349060086547

Department of Educational Foundations and Management, Ambrose Alli
University Ekpoma

Abstract

Education is pivotal to the sustainable development of any nation, particularly Nigeria, where it is a sine qua non to national development. However, the effectiveness of the planning of education in Nigeria is often undermined by the inadequacy of reliable and valid data. This paper therefore, explores the panaceas to the consequences of inadequate data to the planning of education. It highlighted the relevance of data to the planning of education, various consequences of data deficiency, like; poor resource allocation, ineffective policy implementations, and the inability to accurately forecast future educational needs, among others. The following were identified as key panaceas to these consequences; improvement of data collection systems, the integration of technology, capacity building for educational planners, and the establishment of a robust policy and legal framework among others.

Keywords: Educational planning, inadequate data, panaceas to the consequences.

Introduction

Accurate and reliable data are sine qua non to the effective and successful planning of education. United Nations Educational Scientific and Cultural Organization (UNESCO, 2017) affirmed that a credible, accurate, timely and comprehensive data plays a very prominent role in the planning of education. Data according to Obasi and Asodike (2007) is the backbone of effective educational planning, which enables planners to assess current needs, predict future trends, allocate resources efficiently, and monitor the success of educational policies and

<https://journals.unizik.edu.ng/jtese>

programs. They stated further that, in the absence of reliable and comprehensive data, educational planning becomes a speculative exercise, leading to misaligned strategies and suboptimal outcomes. Azuh and Gershon (2019) opined that, the development in the nation's education sector is contingent to the availability of relevant planning data, which of course is very urgent with information and communication mega trend connecting the world into a global village. Reliable, valid and adequate data for planning helps in discovering educational gaps and where more energy needs to be concentrated (Ojiemhenkele and Ogieva, 2024). Educational planning that is based on adequate data drives the success of an educational system and also for trend analysis towards improved policy making and better inputs (Azuh and Gershon, 2019).

Reliable and adequate planning data provide necessary information for diagnosing educational problems, the formulation of academic policies with regards to teacher training institutions and their financial implications (Ojiemhenkele and Ogieva, 2024). It is perceived that data is highly essential in the formulation of educational programmes and the provision of detailed statistics of the existing capacity of teacher training institutions as well as the determinations of the cost of training teachers. To be able to formulate educational programs, detailed statistics of the existing school training capacity, the number of teacher educators, the cost of school teachers, etc would be required and the number of pupils/students seeking admission into various schools are determined and forecasted by relevant and adequate data. The importance of educational planning in national development cannot be overemphasized. In Nigeria, educational planning dates back to the colonial era when the British colonial administration introduced rudimentary forms of planning to align education with colonial objectives (Fafunwa, 1974). According to Taiwo (1980), systematic educational planning gained momentum in the post-

independence period, particularly the introduction of the National Development Plan that aimed at addressing the educational needs of a rapidly growing population and the alignment of the nation's education to national development goals.

It is believed the Nigerian educational sector has continued to face significant challenges, many of which stemmed from inadequate data collection and utilization. Educational planning process in Nigeria has often been hampered by lack of reliable data, resulting in plans that do not accurately reflect the realities on the ground. Mkpa (2013) revealed that the greatest administrative obstacle to achieving the goals of National Policy on Education (NPE) is of course the use of inadequate or unreliable data in making policy decisions by various governments. Alaba (2018) lamented that the development and implementation of plans in the education industry will always be a herculean task in the absence of appropriate data. Being a futuristic exercise, planning can only be useful and successful if the data used in it are adequate and appropriate.

The unavailability of valid data and current population census figures are largely responsible for the unproductive educational planning and policy making endeavors in Nigeria (Ojiemhenkele (2023). The needed instrument in policy making is data, without which educational policies and management will just be mere experimental and, the inconsistencies observed in the nation's education sector decisions, may imply that those decisions were based on incomplete information, intuition and rule of the thumb (Azuh and Gershon, 2019). Undoubtedly, the Nigeria's educational sector is highly plagued by ineffective planning and implementation of strategies, which has of course led to the non-realization of the nation's developmental dividends of education due largely to unavailability of accurate and valid data for decision making.

Inadequate data has serious and grave consequences to the planning of education (Melonie, 2019). With wrong data; time, money and reputation can be lost, which may adversely reflect on lowering educational standards and outputs. The danger of inadequate data can cause significant damage to an educational institution and its activities, resulting in bad and wrong decisions, inaccurate analysis and severe harmfulness of the decisions (Keith, 2023). Inadequate planning data is majorly one of the reasons while most educational policies in Nigeria like; the Universal Primary Education (UPE) of 1976, the Universal Basic Education (UBE) of 1999, and the 6-3-3-4 system of education, in the aspects that concern introductory technology and vocational studies failed (Nelson, 2012; Ojiemhenkele, 2023). Nigeria for the past few decades had witnessed a policy summersault due to inadequate data which makes proper planning and by extension effective delivery of quality education a tall order (Shotayo and Ogundele, 2019). The International Labor Organization (ILO) mission to Nigeria 1981, likened policy making without accurate and timely data to a man running around in the forest in the middle of the night without a torch light (Federal Republic of Nigeria, 2018).

The main purpose for this study therefore is to explore the various panaceas to the consequences occasion by inadequate data to the planning of education, in order to mitigate their devastating effects on educational policy making and implementation. The study highlighted what educational planning is all about, the types of data that are needed in the planning of education, while accurate and adequate data are needed in the planning of education and of course the devastating consequences of inadequate data to the planning of education.

Meaning and Concept of Educational Planning

Educational planning is a complex and interactive process, which involves policy making, choosing among alternative courses of actions, developing strategies,

matching present and current possibilities with foreseeable future by technical and administrative bodies or units that are in charge of the education industry. Ibrahim, Adamu and Shaibu (2021) defined educational planning as the process of selecting the aims and objectives of education and carefully choosing the actions or strategies to achieve them. Educational planning is the process of determining in advance what is to be done, including classification of goals, establishment of policies, mapping out of programs and campaigns, and the determination of specific methods or procedures and fixing day to day schedules (Yawe & Terzungwe, 2022). UNESCO (2017) defined educational planning as the application of education of what real educators seek to instill in students in a rational and specific approach to problems, which involve the identification of objectives and available resources, examination of the implications of alternative courses of actions and choosing wisely among them, deciding on specific targets to be met within specific time frame and developing the best means of systematically implementing the choices that are made.

The overall purpose of educational planning is to assist and facilitate the development of the educational system. Adeyemi and Igbineweka (2005) noted that, the essence of planning education is to determine educational policies, priorities and costs of educational system with due regard to economic, political and social realities. Ibrahim et al (2021) highlighted that education needs to be planned for the following reasons; to ensure adequate and effective planning for educational services, to provide efficient administrative and management control for the maintenance and movement of the system, to ensure quality control through regular inspection and continuous supervision of instruction, and to provide adequate and balanced financial support for all educational services. However, the purpose of planning education is to focus attention on objectives, avoid wastages, harmonize the interest of stakeholders, optimize the use of resources, offset uncertainties and

unanticipated changes in the education sector. In addition, it is to ensure orderliness and rationality, ensures that the products of the educational system are relevant to the needs of the society they are meant to serve, and to ensure that all school's activities and programs are properly coordinated towards the realization of the educational goals and objectives.

Types of Educational Planning Data

Educational planning data encompasses a wide range of information, which may include demographic, economic, infrastructural, and educational indicators.

Demographic Data: Demographic data includes information about the population, such as age distribution, birth rates, mortality rates, migration patterns, and population growth. This data is crucial for projecting school-age populations, which in turn helps in estimating future demand for educational services (UNESCO, 2009). For example, knowing the number of children entering primary school each year allows planners to forecast the number of classrooms, teachers, and learning materials.

Enrollment Data: Enrollment data includes statistics on the number of students enrolled in various levels of education, from primary to tertiary levels. This data helps in assessing the capacity of the education system and identifying gaps in access to education. Enrollment data also provides insights into gender disparities, regional disparities, and trends in dropout and completion rates (World Bank, 2020).

Economic Data: Economic data includes information on the national and regional economies, such as Gross Domestic Product (GDP) growth, income levels, employment rates, and labor market demands. This data is vital for understanding the economic context within which the education system operates. It also helps in aligning educational outputs with labor market needs, ensuring that graduates have the skills and knowledge required by the economy (Hanushek & Woessmann, 2008).

Infrastructure Data: Infrastructure data pertains to the physical facilities available in the education sector, including the number of schools, classrooms, laboratories, libraries, and other learning resources. It also includes data on the availability of basic amenities such as water, electricity, and sanitation in schools. This data is essential for planning the construction and maintenance of educational facilities to accommodate growing student populations (UNICEF, 2012).

Personnel Data: This type of data includes information about the numbers, qualifications, experience, sex, age, and distribution of both teaching and non-teaching staff in the education system (Ojiemhenkele and Ogieva, 2024). This data helps in planning for the recruitment, training, and professional development of school personnel. It also informs policies aimed at addressing personnel shortages and ensuring an equitable distribution of qualified personnel across regions and educational levels (UNESCO, 2014).

Data on Finance and Revenue Sources: Every plan is hinged on financial requirements for its successful implementation, without which, all the provisions in a plan will end up as mere paper work. Information regarding government subvention to the education sector, annual budgetary allocation to education and other internal and external sources of funding, need to be properly identified on which plans for different educational projects and programs are based (Ojiemhenkele and Ogieva, 2024). In this regard, educational planners need to liaise with relevant government agencies and ministries to obtain needed information on projected, actual and available finances from all the sources of generating funds for educational institutions. Some of these agencies or ministries where these financial data can be obtained include the Ministries of Education and Finance, Universal Basic Education Commission (UBEC), Tertiary Education Trust Fund (TETFUND), World Bank, Bursary Department in the various institutions which may have all the

information regarding students' fees/levies and other sources of internally generated revenue.

Performance Data: Performance data includes information on student learning outcomes, such as test scores, examination results, and other measures of academic achievement. According to Organization for Economic Co-operation and Development (OECD, 2019), this performance data is critical for evaluating the effectiveness of the education system and identifying areas where improvements are needed. Performance data also helps in monitoring the impact of educational reforms and policies on students' learning.

Consequences of Inadequate Data to Educational Planning

Inadequate planning data poses significant challenges to the education sector, which may have far-reaching consequences to the effectiveness, equity, and sustainability of the education system. When educational planners lack accurate, reliable, and timely data, it impedes their ability to make informed decisions, which can lead to a cascade of issues affecting all aspects of the education sector. The consequences of inadequate data in educational planning are multifaceted and can undermine the goals of providing quality education for all, as envisioned in global and national educational frameworks.

Inefficient Resource Allocation: This is one of the most visible consequences of inadequate data. Educational planning relies heavily on accurate data to determine the distribution of financial, human, and material resources across various levels and regions of the education system. Without reliable data, planners may overestimate or underestimate the needs of certain areas, leading to either a surplus or a shortage of resources. For instance, overestimating the number of students in a particular region could result in the construction of more schools than necessary, while

underestimating could lead to overcrowded classrooms and insufficient learning materials (Nwankwo, 1981).

In Nigeria, this challenge has been evident in several instances, where discrepancies in data have led to misaligned funding allocations, resulting in some schools being over-resourced while others are severely under-resourced. This imbalance exacerbates existing inequalities within the education system, particularly between urban and rural areas (Obasi & Asodike, 2007).

Poor Policy Formulation and Implementation: Educational policies are formulated based on data that provide insights into the current state of the education system, including enrollment rates, teacher availability, infrastructure, and student performance. Inadequate data can lead to the formulation of policies that do not address the real needs and challenges of the education system. For example, if data on dropout rates are incomplete or inaccurate, policies aimed at reducing dropout rates may be ineffective because they are not targeting the underlying causes (UNESCO, 2009). Moreover, inadequate data can hinder the effective implementation of policies. Without detailed and accurate data, it is difficult to monitor the progress of policy initiatives, assess their impact, and make necessary adjustments. This can result in policies that are well-intentioned but ultimately fail to achieve their objectives due to a lack of proper guidance and oversight (Aghenta, 2001).

Inaccurate Forecasting and Planning: Educational planning involves making projections about future educational needs based on current data. This includes forecasting student enrollment numbers, estimating teacher requirements, and planning for the construction of new schools. Inaccurate or incomplete data can lead to erroneous forecasts, which in turn result in planning that does not align with actual needs. For example, underestimating the future demand for education can lead to a

shortage of schools and teachers, while overestimating can result in wasted resources.

In Nigeria, the challenge of inaccurate forecasting has been particularly acute in the area of teacher planning. In some cases, the failure to accurately predict the number of teachers needed has led to teacher shortages, especially in rural areas, where the problem is compounded by difficulties in attracting and retaining qualified teachers (UNESCO, 2014).

Widening Educational Inequalities: Inadequate data can exacerbate existing inequalities within the education system. Accurate data are essential for identifying and addressing disparities in access to education, particularly for marginalized groups such as girls, children with disabilities, and those from low-income families. Without proper data, these disparities may go unnoticed or be underestimated, leading to policies that fail to target those most in need (UNESCO, 2015).

For example, in Nigeria, there have been significant efforts to increase girls' enrollment in education. However, without accurate data on gender disparities in different regions and educational levels, it is challenging to design and implement effective interventions. As a result, gender gaps in education persist, particularly in northern Nigeria, where cultural and socio-economic barriers continue to limit girls' access to education (UNICEF, 2012).

Compromised Quality of Education: The quality of education is closely linked to the availability of accurate data, which informs decisions about curriculum development, teacher training, and the provision of learning materials. Inadequate data can lead to a misalignment between the curriculum and the needs of the labor market, resulting in graduates who are not adequately prepared for employment (Hanushek & Woessmann, 2008). Additionally, without proper data on student performance and learning outcomes, it is difficult to identify areas where

improvements are needed. This can lead to stagnation in educational quality, as educators and policy makers lack the information necessary to implement targeted interventions that enhance teaching and learning (OECD, 2019).

Failure to Meet International Educational Goal: Countries, including Nigeria, are committed to achieving international educational goals, such as the Sustainable Development Goal (SDG), which aims is to ensure inclusive and equitable quality education for all by 2030. Achieving these goals requires accurate data to track progress, identify gaps, and implement corrective measures. Inadequate data collection and analysis can hinder Nigeria's ability to meet these targets, as it becomes challenging to assess whether the country is on track to achieve its educational commitments (UNESCO, 2015).

Panaceas to the Consequences of Inadequate Data in Educational Planning

Addressing the challenges posed by inadequate data in educational planning requires a multifaceted approach, which may include the following as panaceas.

Improvement of Data Collection Systems: There should be a serious enhancement in the method of collecting data. A standardized procedure for collecting, storing, and processing educational data across all levels of the education should be put in place. UNESCO (2014) emphasized that, a reliable data collection begins with establishing clear guidelines on what data needs to be collected, how it should be collected, and who is responsible for collecting it. In order to achieve this, serious investment should be made in modern data collection technologies, like; Digital Surveys, Mobile Data Collection Tools, and Geographic Information Systems (GIS). These technologies can improve the accuracy and timeliness of data collection, particularly in remote and hard to reach areas, where traditional methods may be less effective (World Bank, 2020). For example, using mobile data collection tools can

help in gathering real-time data on school enrollment, attendance, and infrastructure, thereby enabling more responsive and evidence-based planning.

Furthermore, improving the coordination between various agencies involved in data collection, such as the National Bureau of Statistics (NBS), the Federal Ministry of Education, and State Education Ministries, can help eliminate data redundancies and inconsistencies. This will ensure that all stakeholders have access to the same accurate and up-to-date information, which is critical for effective planning and decision-making (UNESCO, 2015).

Capacity Building for Educational Planners: Education planners should be made to undergo a program of intensive training in their attendance at seminars and workshops so as to equip them with necessary skills that will increase their proficiency and competence in the area of data analysis, forecasting and scenario planning, statistical method and the use of modern data management tools. This kind of capacity building will help them develop the ability to use data to make informed projections about future educational needs, such as predicting student enrollment trends, estimating teacher requirements, and planning for the construction of new schools. By equipping planners with these skills, Nigeria can improve the accuracy of its educational forecasts, thereby reducing the risk of resource misallocation and other planning errors (Aghenta, 2001). Planners should equally be made to undergo training in strategic planning, policy analysis, and stakeholders' engagement, which are essential for effective educational governance and policy implementation (UNESCO, 2014).

Leveraging Technology for Data Management: The integration of technology into educational data management systems is a powerful tool for overcoming the challenges associated with inadequate data. Modern technologies, such as cloud computing, big data analytics, and artificial intelligence (AI), can enhance the

efficiency, accuracy, and accessibility of educational data (OECD, 2019). For instance, cloud-based data management systems allow for the centralized storage and sharing of data, making it easier for educational planners at different levels to access and use the information they need. These systems can also automate the process of data collection and analysis, reducing the likelihood of human error and ensuring that data is consistently updated (UNESCO, 2015).

Big data analytics can be used to analyze large volumes of educational data to identify trends, patterns, and correlations that may not be immediately apparent through traditional analysis methods. This can provide deeper insights into the factors influencing educational outcomes and help planners develop more targeted and effective interventions (Hanushek and Woessmann, 2008). AI can also play a role in enhancing educational planning by automating routine tasks, such as data entry and report generation, allowing planners to focus on more complex analytical tasks. Additionally, AI-powered predictive models can be used to simulate different educational scenarios and predict the potential impact of various policy options, thereby supporting more informed decision-making (World Bank, 2020).

Establishing a Robust Policy and Legal Framework: A robust policy and legal framework is essential for ensuring the sustainability and effectiveness of improvements in data collection and management. This framework should outline the roles and responsibilities of various stakeholders in the education sector, establish standards for data quality and security, and provide guidelines for the ethical use of data (UNESCO, 2014). In Nigeria, the establishment of a National Education Data Policy could serve as a cornerstone for improving educational data management. This policy should mandate regular data collection and reporting by all educational institutions, establish data sharing protocols between different government agencies, and ensure that data is used to inform policy and planning

decisions at all levels of the education system (Aghenta, 2001). The legal framework should also include provisions for monitoring and evaluation to ensure compliance with data collection and reporting standards. This could involve the creation of an independent body responsible for auditing educational data and reporting on the state of data management in the education sector (UNESCO, 2015).

Strengthening Stakeholder Engagement and Collaboration: Effective educational planning requires the active engagement and collaboration of a wide range of stakeholders, including government agencies, educational institutions, teachers, parents, and international organizations. Strengthening this collaboration can help ensure that all stakeholders align their efforts in improving educational data management and planning (Obasi and Asodike, 2007). One approach to enhancing stakeholder engagement is the establishment of multi-stakeholder platforms or committees that bring together representatives from different sectors to discuss and address data-related challenges in education. These platforms can facilitate the sharing of best practices, coordinate data collection efforts, and promote the use of data in decision-making (UNICEF, 2012). International collaboration can also play a vital role in improving educational data management in Nigeria. By partnering with international organizations like; UNESCO, UNICEF, and the World Bank, Nigeria can benefit from technical assistance, capacity building, and access to global best practices in educational planning (World Bank, 2020).

Promotion of Data Driven Decision Making Culture: Addressing the consequences of inadequate data in educational planning requires a cultural shift towards data-driven decision-making. This involves fostering an environment where data is valued as a critical resource for planning and where decisions are made based on evidence rather than intuition or tradition (OECD, 2019). To promote this culture, it is important to integrate data literacy into the training of educators, school

administrators, and policy makers. This includes teaching them how to interpret and use data to inform their decisions, as well as how to critically evaluate the quality and relevance of the data they rely on (Hanushek and Woessmann, 2008). In addition, educational institutions and government agencies should be encouraged to regularly publish data reports and share their findings with the public. This transparency can help build trust in the education system and encourage more stakeholders to engage with and use educational data in their decision-making processes (UNESCO, 2014).

Increased Funding to the Education Sector: There should be an increase funding to the education sector. The present annual budgetary allocation to the education sector should improve from between 5 to 10 percent annually to between 15 to 20 percent as recommended by UNESCO for developing countries like Nigeria (Qosim, 2023). This will help in providing the necessary finances needed to carry out surveys, pay enumerators, transport from one location to another, and procure and recording devices in collection of data.

Establishment of Education Data Bank: Education data bank should be established at all levels of government, so as to avoid this present situation in the future, where planning and implementation are done without relevant, sufficient and accurate data (Ojiemhenkele, 2023). The planning of education should be based on real and genuine statistical data in relation to students/pupils' enrolment and the total number of schools going age for different levels of education, including their demographic variables, and the personnel requirements to make the schools functional. It is only when these needed data are available that projections on facilities and equipments, personnel requirements, and provision of other school service programs can be successfully made. The establishment of education bank mid-wife by a comprehensive, acceptable, and reliable national census exercise will

go a long way to redressing the protracted problems of inaccurate and inadequate data in the planning of education (Nwadiani, 1998).

Regular Conduct of National Population Census: As a matter of urgency, the government should organize and conduct a reliable and acceptable population census for the country. It is only when there is accurate, reliable and acceptable population census that demographic data can be extracted from the population characteristics for effective educational planning. It is however sad to note that the last time population census exercise was conducted in Nigeria was in 2006. This is highly unacceptable for a country like Nigeria with a rapidly growing population.

Strengthen the Research and Planning Division of the Education Ministry: The division in charge of research and planning in the ministries of education, at both federal and state should be equipped with modern facilities and that will aid effective research and planning in the education sector.

Conclusion

Inadequate data in educational planning presents significant challenges that can undermine the effectiveness of the education system in Nigeria. From inefficient resource allocation to poor policy formulation, the consequences of insufficient data are far-reaching and detrimental to the goal of providing quality education for all. However, these challenges are not insurmountable. By improving data collection systems, building the capacity of educational planners, leveraging technology, establishing a robust policy framework, strengthening stakeholder engagement, and promoting a culture of data-driven decision-making, Nigeria can overcome the barriers posed by inadequate data.

These panaceas are not just theoretical solutions but practical steps that, if implemented effectively, can transform the educational landscape in Nigeria. By ensuring that accurate, reliable, and timely data is at the heart of educational

planning, Nigeria can make more informed decisions that lead to better educational outcomes, reduced inequalities, and a stronger foundation for the country's socio-economic development. The journey towards effective educational planning is complex, but with a concerted effort from all stakeholders, the goal of a well-managed, equitable, and high-quality education system is achievable.

References

- Adepoju, A. & Fabiyi, A. (2007). *Planning for Educational Development in Nigeria: A Study of Historical Influences*. Educational research and review, 2, (4), 41-46.
- Adeyemi, J. K. & Igbineweka, V. O. (2005). *Introduction to educational planning*. In J. A. Aghenta & E. O. Omoregie (Eds). Fundamentals of educational management. central book.
- Aghenta, J. A. (2001). *Educational Planning: A Turning Point in Education and Development in Nigeria*. Inaugural Lecture Series, University of Benin.
- Alaba, A. (2018). Challenges of data in educational planning. *KIU journal of humanities*, 3, (2), 221 - 228.
- Azuh, D. & Gershan, O. (2019). Applying population data in educational policy making for Nigeria's development. *International journal of operational research in management, social sciences, and education*, 3, (1), 127 - 139.
- Fafunwa, A. B. (1974). *History of Education in Nigeria*. George Allen & Unwin.
- Fagerlind, I., & Saha, L. J. (1989). *Education and National Development: A Comparative Perspective*. Pergamon Press.
- Federal Government of Nigeria. (2013). *National Policy on Education* (6th ed.). NERDC Press.

- Federal Republic of Nigeria (2018). *Education for change: A ministerial strategic action plan (2018-2022)*. Federal Ministry of Education, FCT: Muhatsa Prints.
- Hanushek, E. A., & Woessmann, L. (2008). The Role of Cognitive Skills in Economic Development. *Journal of economic literature*, 46, (3), 607-668.
- Ibrahim, C., Adamu, M. O. & Shaibu, L. (2021). Constraints to implementation of educational planning and its implications for the management of educational institutions in Kogi state, Nigeria. *Journal of research and scientific innovation*, 7, (4), 123-130.
- Keith, D. F. (2023). *The impact of poor data quality and how to fix it*.
<http://www.dataversity.net/dataeducation>.
- Melonie, V. (2019). *Five major consequences of poor-quality data and how to avoid it*. <https://www.unheashedsoftware.com>.
- Mkpa, M. A. (2013). *Overview of educational development: Pre-Colonial to present day*. <http://www.onlinenigeria.com/linklinkd.com/links/send.esp?blub.534>.
- Nelson, O. (2012). *Foundation of education finance*. Hallman Publishers.
- Nwankwo, J. I. (1981). *Educational planning: Theory and methods*. Fourth dimension publishing.
- Nwandiani, M. (1998). *Educational management for Sub Sahara Africa*. NSEP
- Obasi, I. N., & Asodike, J. D. (2007). *Educational Resource Management*. Pearl publishers.
- OECD. (2019). *Education at a glance 2019: OECD indicators*. OECD Publishing.
- Ojiemhenkele, A. E. & Ogieva, A. E. (2024). Dysfunctional data: The bane of educational planning in Nigeria. *Journal of contemporary issues in education*, 8, (1), 55-63

- Ojiemhenkele, A. E. (2023). Challenges and prospects of educational planning in Nigeria. *International journal of multi-disciplinary in educational research and development*, 3, (6), 213-228.
- Ojiemhenkele, A. E. (2016). An analysis of the Universal Basic Education scheme in Nigeria. *African Journal of School Business*, 1, (1). 9-23.
- Osokoya, I. O. (1987). *37 Years of universal primary education in Nigeria*. Spectrum books.
- Shotayo, E. & Ogunlede, B. O. (2019). Big data: Next level educational planning for National development in ICT. *International Journal of Technology in Education*, 3, (2), 1-10.
- Taiwo, C. O. (1980). *The Nigerian education system: Past, present and future*. Thomas Nelson.
- Qosim, S. (2023). 2024 budget: Tinubu's improved funding for education still below UNESCO recommendation. <http://www.premiuntimesng.com>
- UNESCO. (2006). *Global education digest 2006: Comparing education statistics across the world*. UNESCO Institute for Statistics.
- UNESCO. (2009). *EFA global monitoring report 2009: Overcoming inequality, why governance matters*. UNESCO publishing.
- UNESCO. (2014). *Teaching and learning: Achieving quality for All, EFA Global Monitoring Report 2013/4*. UNESCO publishing.
- UNESCO. (2015). *Education for All 2000-2015: Achievements and challenges*. UNESCO publishing.
- UNESCO (2017). *The data revolution in education*. UNESCO Institute of Statistics producer.
- UNICEF. (2012). *The state of the world's children 2012: Children in an urban world*. UNICEF.

United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations publishing.

World Bank. (2020). *Nigeria: Learning Poverty Brief*. World Bank group.

Yawe, A. A. & Terzungwe, G. S. (2022). Educational planning in Nigeria: Constraints and prospects. *Education and Resource Journal of Policy and Curriculum Development*, 9, (1), 23-29.