



NATIONAL EDUCATION MANAGEMENT INFORMATION SYSTEM (NEMIS) FUNDING MODELS: CHALLENGES AND WAY FORWARD

DR. Grace Imeh IMEH

Phenosystems Education Consulting & Publishing, B3b Akwa Savings and Loans Estate, Uyo,
Aks
graceeimih@gmail.com; +2348133559504

Abstract

This study focused on funding models of the National Education Management Information System (NEMIS). The aim of NEMIS is to provide timely and reliable educational data that will aid policy makers and education planners make data-driven planning, decisions and policies. Data gaps occur at the three tiers of government due to challenges of NEMIS funding models. Government alone cannot bear the financial burden of EMIS, thus the need to leverage on partnering with Development Partners, Corporate Social Responsibility (CSR), Public-Private Partnerships (PPPs), existing funding channels. Challenges that come with these funding models include aid fragmentation, national budget deficit, high Corporate Income Taxes (CIT), informal sector tax regulations. These challenges result in setbacks at different stages of data management cycle resulting in poor education outcomes and development. However, it was recommended among others that the government through sustainable nationwide security and safety that will attract domestic and foreign investors to the economy towards increased Corporate Social Responsibility to NEMIS in form of technical and financial assistance.

Key Words: Funding, Educational Management Information System

Introduction

The Federal Government of Nigeria spreads commitments across the three tiers of government that enable holistic education service delivery. Strategies are put in place to implement 10 Ministerial priority areas with the commitment to ensure that total spending increase by 50% over the next two years and up to 100% within five years of 2021 to 2025 (FME 2021). Nigerian government makes commitments to work with all states and their Local Government Areas, to ensure that States progress towards or maintain spending levels above 20% of the total

budget to achieve national minimum standards for education outcomes. One of the priority areas is the transformation of an integrated Education Management Information System (EMIS) for timely reporting, effectively enabling the sector to support decision-making, policy analysis and formulation, planning, monitoring and management at all levels of the system. (Global Partnership for Education, 2021).

Management of information systems is universally applicable to different sectors including the education sector. Education Management Information System was described by Ogunode and



Usman (2023) as the use of information technology in educational institutions for data processing, recording, storing and producing information that school administrators can use to make decisions, forecasts and plan for the development of education. The authors identified inadequate funding as one of the setbacks of successful development of EMIS in the educational sector across the country. Education Management Information System are the tools that countries use to manage education data, therefore funding EMIS has emerged a priority in efforts enhance evidence-informed decision making that improved education systems. The assessment of the state of education demands information about the inputs, resources, operations and outcomes of the education system.

Global improvements in education sector have brought about the evolution of EMIS. This is made possible through the following factors; availability of more powerful technologies; increased expectations on EMIS (i.e. supporting planning, monitoring and evaluation); evolving national and international standards; public demand for greater accountability in the education sector; increased complexity of education sector; increased complexity of education systems; and increased focus on educational outcomes of inputs vs outputs (UNESCO 2020). To this end, quality decisions concerning education are drawn from effective data-driven sources.

Data and information are indispensable to fulfilling objectives of education at the global level because this allows countries to monitor progress

towards education international agenda such as the Sustainable Development Goal 4. At the national level, education data identify gaps in Nigeria's education system that guide policy formulation, strategic planning, programmes, monitoring and evaluations of development interventions and reform initiatives needed to bridge those gaps at the federal, state and local government levels. To this end, Federal Ministry of Finance, Budget and Economic Planning in synergy with the policy makers of Nigeria's education sector emphasize on the funding, development, management and maintenance of a credible, efficient and up-to-date Education Management Information System of all three tiers of government (FRN 2013). The clarification of responsibilities of the three tiers of government call for coordination, collaboration and networking of activities of National Education Management Information System (NEMIS), State Education Management Information System (SEMIS) and Local Education Management Information System (LEMIS) (FRN 2013).

NEMIS was established to provide an unimpeded flow of data and information on education in Nigeria to all people, anywhere in the world, through the use of basic and advanced information and communication technologies. The World Bank (2015) highlighted categories that constitute EMIS as follows: student management system; teacher management information system; school management system; infrastructure management information system; asset management system; human resource management information system; national learning



assessment; student tracking and examination systems; and certificate distribution systems.

The demand for education data and information at the three tiers of government has become more complex to meet the growing and evolving sector in recent years. However, not all data is captured in Nigeria's NEMIS due to a host of factors. This study focuses on the subject of funding models because facilities, equipment, human resources and power for stable, efficient and effective operations are capital-intensive which require high levels of funding. Gbadeyanka (2022) reported that the Permanent Secretary in the Federal Ministry of Education, Mr. Andrew Adejo, had called for strong synergy and cooperation among stakeholders in the funding of the Nigeria Education Management Information System. In this connection, government welcomes and encourages the participation of individuals, communities, organized Private Sector (OPS), International Development Partners such as avenues of funding models for NEMIS.

In as much as the NEMIS under the Federal Ministry of Education had made tremendous progress in the production and dissemination of reliable and timely data in 2019, 2020 and 2021 for national and global dissemination, there is still heavy reliance on manual filling systems. This setback may occur as result of shortage of hardware and software, lack of trained staff, absence or poorly designed IT infrastructure. These could further be caused by challenges in the types of funding models available for NEMIS.

Basic Costs Covered by Nemis

Management of information systems is capital-intensive. Partnership with international development partners enable lower-income countries measure the quality education indicators as well as regional ratings. World Bank (2014); UNESCO (2020) outlined comprehensive items and activities items that require funding for NEMIS in order to ensure sustainability, accountability and efficiency.

- 1) Recruitment and paying of personnel dedicated to EMIS tasks at various administrative levels (federal, state and local government levels).
- 2) Trainings and professional development opportunities.
- 3) Procurement of information and communications technologies that include hardware and equipment (computers, mobile devices, data servers), software (tools for data collection, analysis software, reporting software, internet's connectivity), technical support, physical space (infrastructure rental)
- 4) Maintenance costs involving recurrent costs such as IT license renewal fees, technical support for hardware and software, and technicians to handle connectivity issues. Maintenance of websites and online accessible databases.
- 5) Reporting of annual school census, involving costs for printing and copying, logistics for distribution and collection of forms, publication of statistics reports.



- 6) Transportation logistics for data collection.
- 7) Data collection and systems approach to better education results that strengthens education systems.

Funding Models for NEMIS and their Challenges

Activities of NEMIS are capital-intensive and the government alone cannot bear the burden of funding. Consequently, the following financing models shall be instituted and sustained for EMIS at National, State, LGEA. However, these funding models have their challenges.

1. Harnessing partnerships with development partners:

These are local and international collaborating agencies which support EMIS financially and technically. Engage local and international Development Partners such as National Bureau of Statistics, National Population Commission, National Planning Commission, and Central Bank of Nigeria, UNESCO, The World Bank, Foreign Commonwealth and Development Office (FCDO). The number of International Development Partners have increased over the years, therefore having more donors creates new opportunities for broader partnerships among different development actors. At the same time, it poses challenges for countries receiving aid by increasing fragmentation, transaction costs and this makes management of aid more challenging. OECD in Terrence and Nicholls (2021) described Aid Fragmentation as aid that comes in too many small slices from too many donors making it difficult for partner countries to effectively manage their own development. This is detrimental to expected

development outcomes of the educational sector.

Survey reports by UNESCO (2020) revealed that initial EMIS costs are often covered by development partners but this financial support is not always sustained beyond the life span of the project, threatening the sustainability of EMIS. Financial and technical dependency on most development partners cover the initial stages of EMIS development, the latter stages are not backed by adequate domestic funding. Poor management of multiple aid fragmentation could create room for misappropriation of funds.

2. Leveraging on existing funding channels:

The funding channels include FME, UBEC, SUBEBs, SMoE, LGEAs which fund EMIS activities at the federal, state and local government levels respectively. Efforts towards the improvement in the funding of education at all levels involves at least 26% of the federal, States and local governments budget as recommended by UNESCO. Nigeria's budgetary allocation to the education sector has been below the recommended benchmark for developing countries. Historical and projected expenditures from FME (2021) documented the following: (2021, 11.2%; 2022, 14%; 2023, 16.7%; 2024, 20%; 2025, 22.5%). In the 2023 budget, the sector got N1.79 trillion, representing 8.2% of the appropriation bill. This is lower than the projected commitment of 16.7%, which does not meet the recommendation of 26%. This allocated percentage is far lesser than the recommended percentage for education. This implies that the ministries, departments and agencies under these



funding channels are underfunded. The expected budget allocation to education cannot be achieved overnight because Nigeria's 2023 is currently about 4.3% deficit of Nigeria's Gross Domestic Product (GDP). A budget deficit occurs when expenses exceed revenue. As the government takes steps to improve the deficit, there is need for reduction in government spending across all sectors. The expenditure for education sector is curtailed hence the less than 26% budgetary allocation to education. This invariably affects funding for NEMIS infrastructure. This automatically affects domestic allocation of funds to NEMIS. Given limited country budgets and multiple government priorities, EMIS is not given a standalone allocation for domestic financing.

3. Accessing funds through corporate social responsibilities:

Corporate social responsibility is a commitment by a company to make positive environmental, social and economic impacts in the community. Ezechukwu and Uzuagu (2022) described corporate social responsibility as a business mechanism that requires businesses to accept a change in outlook by recognizing their responsibilities to their environment and stakeholders and not just their shareholders. The provision of reliable data as the responsibility of NEMIS, comes with challenges such as fund shortages. This calls for opportunities for global businesses to fill this deficiency. According to Camilleri (2016) businesses become key players in addressing the needs of education. Corporations build collaborations with educational institutions

and agencies in order to engage in philanthropic activities for shared values for business and towards education.

Nigeria's budget deficit requires the government to adjust fiscal policies to increase in taxation. Corporate income tax is a tax imposed on profit from all sources of business or trade activities and is also imposed on foreign companies operating a business in Nigeria. The rate of tax is 30% of total profit of a company. Nigeria's 30% corporate tax is one of the highest in the world. The average corporate tax rate for Africa is 27.6%; Asia 19.52%; European Union 9.74%, and the global average 23.37%. (ZAWYA 2023). This limits the level of corporate social responsibility of corporate bodies towards the education sector.

Literature reviews suggested that corporate social responsibility in the Nigerian corporate sector has not been efficient as to provide maximum engagement of businesses and nation building. The authors identified systemic corruption and political influence as major banes of corporate social responsibility implementation in Nigeria. In addition, lack of CSR enforcement framework, institutionalized corruption, political and social insecurity militate against not just corporate social responsibility but the ease of doing business in the country. Ugwunwanyi and Ekene (2016) outlined challenges in implementing corporate social responsibility in Nigeria. CSR in Nigeria is at the discretion of companies; companies are not bound by law to fund educational agencies. Currently, companies lack the necessary drive to effectively carry out



CSR. Political insecurity in the country discouraged domestic and foreign investors.

4. Ensuring legislative backing from taxes paid by corporate bodies relating to education

Education tax is a tax chargeable on all companies registered in Nigeria at chargeable profits as a contribution to the Education Tax Fund. This means that all registered companies in Nigeria are required to pay a percentage of their accessible profit into an Education Tax Fund. A 2% education tax is imposed and disbursed through the Tertiary Education Trust Fund (TETFUND) to address needs in the sector. In considering tax compliance, there are two economic sectors namely formal and informal sectors. The former comprises large corporate and multinationals with trackable records of tax compliance while the latter comprises small and medium sized enterprises which constitute over 65% of the economic sector. Unfortunately, the non-compliance in the informal sector is one of the critical factors affecting government revenue collection and hindering the provision of public services (Aremu and Siyanbola 2021). Most of the businesses are registered with the Corporate Affairs Commission (CAC) but are not enumerated for taxes.

Monye and Abang (2020) observed that Nigeria's fiscal contributions are less than 10% of GDP. The researchers recommended that Nigerian government adopt new systems like economies of Ghana, Kenya, Tanzania and Brazil adopted new strategies that involve association taxing, 5% penalty for late tax payment, block management system and simples regime respectively.

Challenges of this funding model include poor understanding of tax laws processes, lack of proper records of business transactions, culture of deliberate tax evasion, incorrect business addresses, corruption of tax officials, lack of sensitization by tax authorities to encourage compliance, lack of effective regulations etc. Greater percentage of tax defaulters and increase in tax evasion are traced to the informal sector. Bringing the informal economy into the tax net has proven more difficult.

5. Intensifying use of private public partnerships:

Section 1 of Infrastructure Concession Regulatory Commission Act 2005 provides that any Federal Government Ministry, Agency, Corporation or body involved in the financing, construction, operation or maintenance of infrastructure, by whatever name called, may enter into a contract with or grant concession to any duly pre-qualified project proponent in the private sector for financing, construction, operation or maintenance of any infrastructure that is financially viable or any development facility of the Federal Government in accordance with the provisions of the Act (Idornigie 2020). Hassan and Fatile (2022) viewed PPP as a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. Both sectors share in the risks and rewards potential to the delivery of service or facility.

ICT infrastructure for EMIS at all levels is capital-intensive and may require



part funding from the private sector in which the government retain ownership while contracting specific functions to the private sector. The system development life cycle and the EMIS cycle involves a lot of processes that give rise to different models of public private partnerships such as build, operate, transfer (BOT); Joint Development Agreement (JDA); Operations and maintenance (OM); Design, build, operate and transfer (DBOT), Leasing contract, outsourcing etc.

Challenges of this funding model include the following: weak political and legal framework; unreliable mechanisms for sharing risks and profits; failure to honour contractual agreement; change of government discontinue existing contracts; corruption; high price of public services; monitoring, compliance and enforcement of transactions; lack of communication to address reforms or issues

Way Forward

The following recommendations were made to solve challenges encountered in NEMIS funding models. The Federal Ministries of Finance, Budget and National Planning, Information and Culture and Defense all in collaboration with the Federal Ministry of Education can take on the following recommendations:

1. The Government should harness all technical and financial aid from Development Partners through National Aid Policy to be more complementary and coherent at all levels in order to eliminate aid fragmentation. In order to manage aid diversity, donor mapping should be carried out to discover the sectors, ministries, departments and agencies that are over-provided for and

; ones that are under-aided. Donors adjust their aid streams to Nigeria's national strategies and agreed-upon sector rationalization efforts. If NEMIS is underfunded, the donor mapping reveals this for more funds allocation that cover all stages of EMIS at the national, state and local levels.

2. Increase in allocation to the education sector can be achieved through gradual economic growth. Economic growth is often driven by consumer spending and business investment. Economic growth can be achieved through the following: Improvement in infrastructure that attracts foreign and domestic investors; Revitalising trade, that is, increase in exporting activities and Free Trade Zones; improvement in educational opportunities and outcomes; Improved monetary and fiscal policies; Science and technology innovation and improvement; Increase in employment opportunities and rates; Strategic immigration reforms; etc.

A gradual shift from budget deficit to budget surplus indicates that a government's finances are being effectively managed and an indicator of a healthy economy. A surplus implies the government has extra funds which can be used for different purposes including reinvestment of more funds to the education sector, especially in research, development, revitalization and maintenance of NEMIS, SEMIS and LEMIS.

3. The government's role is important in promoting corporate social responsibilities that favour the education sector. Expansionary fiscal



policy will lower corporate income tax. A higher amount of profit is available at their disposal. Also, expansionary monetary policies which reduces bank rates enables companies acquire loans for increased business activities and more profits.

Corporate social responsibility is voluntary without mandatory legislation. Awareness campaigns helps draw attention to view CSR as a win-win strategy for accountability and responsibility. Businesses and communities become partners. This builds a platform for successful public partner relationships. The Federal Ministry of Education through Ministry of information can shed light on CSR as practiced in developing countries towards their EMIS, so that developing countries like Nigeria can learn from the best practices in implementing same for NEMIS for sustainable improvement.

4. Adequate information through the use of unified systems technology to harness data on every business makes it easy to project annual tax. There is need to enumerate taxes of the informal sector because records reveal that this sector makes up 50% of the Nigerian GDP and should be compelled to contribute to the country's revenue. Revenue from social media-based businesses should be duly registered with online platforms for tax payments. To this end, the Nigerian government can increase funds allocation to the education sector
5. Legal and regulatory frameworks must be duly established and adhered to.

There should be specific laws for PPP enacted to strengthen and uphold policies, guidelines, law of contracts and procurement rules that pertain to MDAs such as NEMIS. Procedures of the National Policy on PPP and ICRC Act of 2005, which articulates PPP Process should be duly followed in order to ensure best international practices that pertain to shared responsibilities between both sectors. This will build trust and encourage more private actors in PPP and to accelerate the development of market for EMIS PPPs. The NEMIS can intensify the PPPs by ensuring private investors recover expected returns and a build-up of increased public interest attracts more open competition and funding.

The Federal Ministry for Defense takes up counter-terrorism measures that safeguard the lives, safety and businesses as key sectors of the economy. Guaranteed nationwide safety and security of domestic and foreign investors and investments makes for more opportunities for PPPs to thrive in Nigeria.

Conclusion

Adequate funding of NEMIS ensures thorough data management which provides granular and aggregated data that can support data-driven decision-making from the ministry level to the school level. Handling challenges that pertain to NEMIS funding models involves synergistic efforts of five Federal ministries. Improved learning outcomes that overall educational development will be achieved.



References

- Aremu, E. & Siyanbola, T. T. (2021). Tax education and compliance in the informal sector of Ogun State Nigeria. *European Journal of Accounting Auditing and Finance Research*, 9 (6), 1-25.
- Camilleri, M. A. (2016). Corporate sustainability and responsibility towards education. *Journal of Global Responsibility*, 7 (1), 56-71.
- Ezechukwu, L. C. & Uzuagu, A. U. (2022). A review of corporate social responsibility: Its perception, practice, impact, and challenges in Nigeria. *Journal of Accounting and Business Education*, 7 (1), 1- 24.
- Federal Ministry of Education. (2021). *Financing GPE 2021 - 2025*. Retrieved from <https://assets.globalpartnership.org>
- Federal Republic of Nigeria. (2013). *National policy on education*. (6th ed.). Lagos: NERDC Press.
- Federal Republic of Nigeria. (2021). *National policy on education management information system (Emis) and implementation guidelines*. <http://nemis.gov.ng>
- Gbadeyanka, M. (2022, June 27). Adejo advocates funding of NEMIS for optimum performance. *Business Post Nigeria*. <https://businesspost.ng/education/adejo-o-advocates-funding-of-nemis-for-optimum-performance/?amp=1>
- Global Partnership for Education. (2021). *Nigeria - domestic financing commitment 2021-2025 | Documents | Global Partnership for Education*. <https://www.globalpartnership.org/content/nigeria-domestic-financing-commitment-2021-2025>
- Global Partnership for Effective Development Co-operation. (2020). *Challenges and opportunities of development actors*. <https://effectivecooperation.org/content/challenges-and-opportunities-development-aid-actors>
- Hassan, K. I. & Fatile, J. O. (2022). Public private partnership and educational infrastructure in Nigeria. *Journal of Public Administration, Finance and Law*, 26, 138-151.
- Idornigie, P. O. (2020). *Public-private partnerships: The issues, prospects and challenges*. <https://paulidornigie.org/wp-content/uploads/2020/12/Public-Private-Partnership-the-issues-prospects-and-challenges.2.pdf>
- Monte, J. & Abang, O. (2020, October 15). Taxing the informal sector- Nigeria's missing goldmine. *Daily Tax Report International*. <http://news.bloomberntax.com/daily-tax-report-international/taxing-informal-sector-nigerias-missing-goldmine>
- Nigerian Finder (2023). *Education tax in Nigeria: Overview and details*. Retrieved July 13, 2023, from <https://NigerianFinder.com/education-tax-in-nigeria/>
- Ogunode, N. J. & Usman, Z. (2023). Deployment of educational management information system (EMIS) in administration of public secondary schools in Nigeria. *Modern Journal of Social Sciences and Humanities*, 12, 1-13.



- Ojo, J. (2023, January 15). Matters arising: Despite growing concerns, Nigeria's education allocation still below recommended benchmark. *The Cable*. <https://www.thecable.ng/matters-arising-despite-growing-concerns-nigerias-efucation--allocation-still-brlow-recommended-benchmark/amp>
- Ugwunwanyi, A. & Ekene, C. (2016). Corporate social responsibility and its implementation in Nigeria: Problems and prospects. *Global Journal of Human Resource Management*, 4 (2), 60 - 69.
- UNESCO. (2020). *The role of education management information systems in supporting progress towards SDG 4: recent trends and international experiences - UNESCO Digital Library*. <https://UNESCO.org/ark:/48223/pf0000374542>
- Wood, T. & Nicholls, I. (2021). Aid fragmentation and volatility in the Pacific. *Asia & the Pacific Policy Studies*, 8 (1), 114-128.
- World Bank. (2015). *The impact of education management information systems: The case of Afghanistan*. http://blogs.worldbank.org/education/impact_education_management_information_systems_case_afghanistan
- World Bank Group. (2014). *What matters most for educational management information systems: A framework paper*. <https://www.worldbank.org/education/saber>
- Zawya, L. (2023). *Nigeria's 30% corporate tax is one of the highest in world - report*. Retrieved July 18, 2023, from <https://www.zawya.com/en/economy/africa/nigerias-30-corporate-tax-is-one-of-the-highest-in-world-report-bmguetc2?amp=1>