

LGEA Education Management Database Roll-out

Practice Paper

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Introduction

Nigeria's Education data challenge

The absence of functional Education Management Information Systems (EMISs) and reliable databases at all levels of education has, over the years, precipitated a major education data challenge in Nigeria. Huge gaps in data availability, credibility and timeliness have hindered evidence-based policymaking, planning and sector performance monitoring and feedback.

Consequently, investments and efforts in educational development are usually not well-targeted and effectively managed to yield the desired results. Effectively addressing education data challenge is therefore key to ensuring inclusive quality education provision and Nigeria's educational development. The establishment and sustenance of functional Education Management Information Systems (EMISs) at federal, State and local government levels should be a primary focus of government and all education stakeholders.

The development and adoption of the Nigeria Education Management Information System (NEMIS) policy was aimed at facilitating the establishment and sustenance of synchronised functional EMISs for pre-primary, primary and secondary education to support educational development efforts at federal and state levels. The policy mandates the Federal Ministry of Education (FME) and all the 36 States and the Federal Capital Territory (FCT) to consistently generate and provide quality education data mainly through Annual School Censuses (ASCs) for policy making, advocacy, planning, performance monitoring and feedback. It prescribes a uniform national framework including common instruments, processes, software, and a defined cycle coordinated by FME.



ESSPIN's Support to EMIS Development and Functionality

However, there are clear indications that the policy has been poorly implemented and largely ineffective. Weak institutional capacity and support, inadequate technical capacity, ineffective federal leadership, and poor coordination among the three tiers of government and other stakeholders have prevented the establishment of functional national and states' EMISs. Record keeping and documentation at Local Government Education Authorities (LGEAs) and schools are poorly organised and unreliable. ASCs are hardly conducted in most States. The resultant dearth of quality data and empirical evidence for qualitative policymaking, planning and performance monitoring constraints progress in the provision of quality inclusive education in Nigeria.

ESSPIN is designed to stimulate improved access to inclusive quality basic education and quality learning outcomes in the six programme states by supporting systems and institutional reforms. ESSPIN's interventions are driven by a theory of change based on evidence and underpinned by an integrated approach to school improvement. This integrated approach is operationalized through a School Improvement Programme (SIP) model to liberalize and boost access as well as enhance the quality of teaching and learning. The SIP encompasses:

building the skills and competence of teachers, head teachers, school based management committees, cadres of LGEA-based support/mobilisation officers and civil society organisations;

establishing advisory and quality assurance school support systems;

helping to review and re-structure State systems (Ministries of Education, State Universal Basic Education Boards [SUBEBs] and Local Government Education Authorities [LGEAs]) to deliver meaningful primary education in all public schools;

institutionalizing strategic planning and effective sector performance monitoring and feedback; and

engaging politically to leverage resources for sustainable school improvement.

Availability of timely and credible data for evidence-based policymaking, planning, advocacy, and monitoring and evaluation (M&E) is essential to inform and successfully implement the SIP. Support to EMIS development and functionality is therefore a major intervention area and work-stream of ESSPIN. This support is provided to the six programme states of Jigawa, Kaduna, Kano, Kwara, Lagos and Enugu as well as to the Federal Ministry of Education (FME)-NEMIS at the federal level. The objectives are to enhance:

States' and LGEAs' capacity to establish sustainable integrated bottom-up (school-LGEA-SUBEB-MoE) data management system for the availability of credible data to support school improvement;

FME-NEMIS capacity to provide competent national technical leadership and effective coordination of the development of functional national and states' EMIS in Nigeria.

ESSPIN provides Technical Assistance (TA) to the programme states for the timely conduct, production and dissemination of Annual School Census (ASC) data. TA is also provided to develop and strengthen other components of the States' EMIS such as education quality assurance reporting, school supervision and support information as well as staff career and professional development records. Continuous training, capacity development and support is provided to EMIS and other relevant staff of MoE, SUBEBs and LGEAs to build technical capacity and proficiency in data collection, analyses, reporting, dissemination and use for school improvement.



The LGEA Database Initiative

Institutionalization of good practices, government ownership and sustainability are targets of ESSPIN's support to EMIS development. The following strategies are deployed for achieving this:

Engagement with UNICEF, World Bank and other relevant International Development Partners (IDPs) and programmes to work out and articulate a coordinated strategy and approach to supporting EMIS development in Nigeria.

Collaboration with UNICEF, World Bank and other relevant International Development Partners (IDPs) and programmes to engage and support FME and States in the review and streamlining of the national EMIS policy, ASC protocols and software regulations to ease bottlenecks, enhance user-friendliness and facilitate state ownership.

Collaboration with UNICEF in federal and states' capacity development for the establishment and sustenance of a core team of technically competent federal and state EMIS staff to be highly proficient in ASC software, processes and deliverables and lead national capacity development rollout beyond ESSPIN.

Production of appropriate documentation including practice papers and user manuals to serve as resource materials to support continued professional development and good practice among states' EMIS and federal (UBEC & FME) NEMIS staff.

The Database Initiative

The LGEA Education Management Database is a component of ESSPIN's support to EMIS development and functionality in the programme states. It is a substantial and far-reaching intervention to address the weaknesses of States' EMIS in a systematic and sustainable manner. The initiative is meant to bring about institutional and technological reforms in basic education data management and utilization. Its major focus is LGEA capacity development for efficient and effective education data management to drive and sustain basic school quality improvement. This aligns with and helps to operationalise the NEMIS policy as it relates to ASC/EMIS decentralisation.



The database is for the collection, storage, analysis, management and dissemination of data and information on pupils, staff, facilities, teaching -learning processes and community participation at school level on LGEA bases. The LGEA databases are integrated into the State Education Management Information System (EMIS) for state-wide application and use.

Rationale for ESSPIN's Support

ESSPIN supports integrated bottom-up (school-LGEA-SUBEB-MoE) state EMIS. Data from ASC along with data and information data from other sources to drive school improvement are needed to populate EMIS. The LGEA Education Management Database is a constituent of state EMIS. State EMIS cannot be complete, credible and functional without functional LGEA databases.

LGEAs require capacity development and support to develop, manage and use functional LGEA education management databases. ESSPIN's support to the LGEA Education Management Database initiative is to facilitate decentralisation of EMIS and ASC processes on LGEA basis to improve data quality and more effective use of evidence for school improvement. Furthermore, it addresses the necessity for the availability of additional information to complement ASC data for use in school improvement. Besides ASC data, the database holds and regularly updates data and information on school attendance, staff career and professional records, teaching-learning processes and community participation in school improvement on LGEA basis.

Objectives of the Database

Very low capacity at the LGEA level constrains progress in EMIS functionality and effective use for school improvement. The capacity limitations of LGEAs tend to reinforce centralization of EMIS and its processes leading to data gaps in availability, quality, timeliness and completeness. The objectives of the LGEA Education Management Database initiative are to:

- Ensure an integrated bottom-up State Education Management Information System (EMIS).
- Build and strengthen capacity of LGEAs to develop and effectively use functional databases for basic school improvement.
- Improve EMIS processes for timeliness and to enhance education data availability, quality and completeness.

LGEA Database Framework

Ensure the timely availability of data and evidence for quality policy development, planning, budgeting and management.

Support effective and resourceful staff/personnel management and administration at LGEA and state levels.

Make State EMIS more functional and user-friendly for:

Sector Diagnosis and Needs Assessment.

Policy and strategy development and implementation.

Planning (strategy development, Resource determination & deployment, priority setting)

Performance Monitoring and Evaluation (Input, processes, outputs, outcomes)

Advocacy, stakeholders' sensitization and mobilization for strengthening partnerships and stakeholders' participation

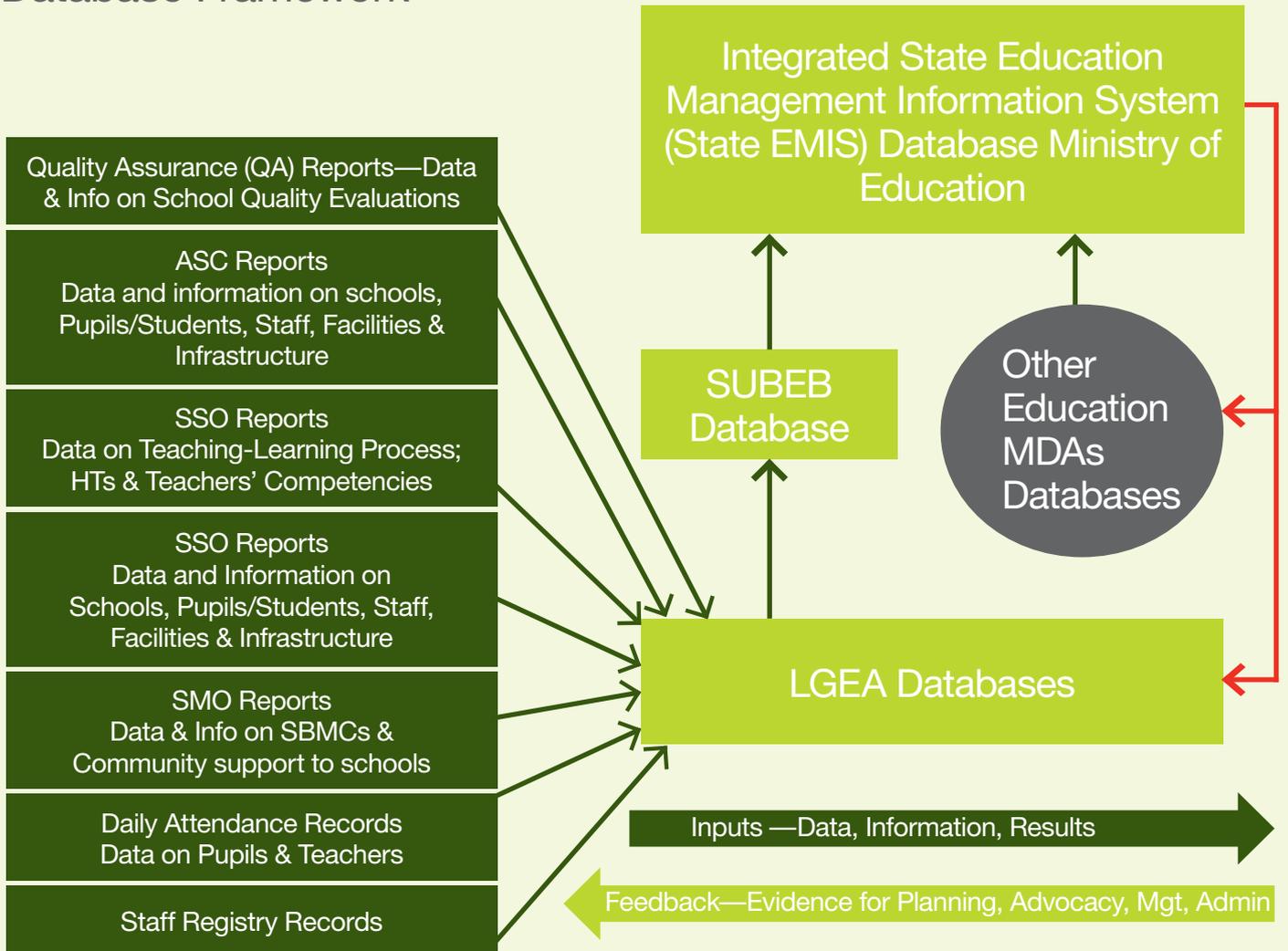
Resources mobilization

Voice and Accountability

The LGEA Education Management is an integral part of the States' Education Management Information System (EMIS). The aggregation of the databases of all LGEAs in the State make up the State Universal Basic Education Board (SUBEB) Database. The aggregate of SUBEB Database along with the Databases of the other education MDAs constitutes the State EMIS. Diagram 1 below is a graphic presentation of the LGEA Education Management Database framework.



LGEA Education Management Database Framework



LGEA Database Contents

The database captures school-based data and information. The database allows easy access and appropriate use by relevant LGEA staff (EMIS & HR officers, SMOs, SSOs, QAEs) and the Education Secretary for data entry, collation, analyses, management and report creation. There are password-enabled operations to check unauthorized access and manipulation of the database to ensure its credibility and integrity. Table 1 below is a summary of the contents of the database.

Table 1: Contents of LGEA Database

LGEA Database Component	Details of Content
Data and information on Schools	Data and information on pupils, teachers, facilities, infrastructure, instructional materials, governance on each school and coordinates as captured by the ASC as well as periodic updates. The database has capability of GIS/GPS spatial display of school locations and attributes using selected indicators.
Staff career and professional development records	All staff details and records - biodata, pre-service training, qualifications, career progression, in-service training and professional development records, classes and subjects taught, records of service; including transfers, promotions, etc.
Records and reports of school supervisory and support visits by LGEA School Support and Social Mobilization Officers (SSOs & SMOs)	Data and information on: <ol style="list-style-type: none"> i. Teaching-learning processes, methodology & support. ii. Teachers' & HTs' competencies and performances. iii. SBMCs activities and functionality. iv. Community participation and support to school improvement.
Quality Assurance Records and Reports	Data and Information on school quality and performance based on Whole-School Evaluation (WSE) methodology and evaluation schedule.
School Attendance Records	Pupils and teachers school attendance records and information collected and reported on a weekly basis.



LGEA Database Pilot and Rollout

The Kwara Pilot

ESSPIN's support to LGEA Education Management Database began in 2013 with a pilot in five LGEAs of Kwara State. Kwara State was chosen because it presented the highest potential for the successful piloting of the initiative. The State Government's commitment was evident with the offer of already existing ICT Resource Centres of the 16 LGEAs of the State. Each of the Resource Centres had been recently fully equipped with 12 Computer workstations, adequate furniture, a networked printer and stand-by electricity generator through government funding. In addition, the State's MoE and SUBEB EMIS staff were well-motivated and perhaps the strongest of the six ESSPIN-supported states.

The pilot was intended to:

evaluate and establish the feasibility and risks of the initiative;

validate and establish the ICT, infrastructural and administrative requirements;

provide lessons and the opportunity to improve its functionality and cost-effectiveness;

establish its potentials and benefits in facilitating EMIS development and functionality;

provide proof of concept and evidence for effective engagement with stakeholders, particularly government for buy-in and ownership; and

provide lessons and experience to inform successful rollout of the initiative to other LGEAs of Kwara and the other States.

ESSPIN provided technical assistance for the LGEA Database pilot. The technical assistance covered Software development and deployment. In addition, the programme provided training and capacity development to SUBEB and Ministry of Education EMIS staff, LGEA EMIS staff as well as LGEA staff responsible for School Support Services, Social Mobilization, Quality Assurance and Human Resources Management. The State on its part provided the required ICT equipment and facilities, and ensured that appropriate and relevant staff were selected and supported to attend the required trainings.

Database Rollout

Institutionalisation and sustainability were embedded in the processes of the Kwara pilot. The processes in the 5 pilot LGEAs included:

demonstration of a simulated model and sensitization of the LGEA Education Secretaries, Directors and relevant staff;

verification and certification of the Resource Centres as suitable and adequately equipped;

setting up, configuration of the LGEAs' systems and installation of the Database Software;

master-training of select MoE and SUBEB staff and LGEA EMIS Head (Lead staff) on systems' configuration, software installation and database administration & management;

step-down training of the LGEAs' EMIS, School Support Services, Social Mobilization, Quality Assurance and Human Resources Management on database navigation, population and report production.

The strategy deployed was effective, leading to the timely establishment of the database in the five pilot LGEAs. The objectives of the Kwara pilot were fully achieved. This resulted in an immediate and almost simultaneous establishment to all 16 LGEAs of Kwara State by first quarter of 2014. The availability of suitable and well-equipped ICT Resource Centres in all 16 Kwara LGEAs and ESSPIN's intense TA support were also key success factors. The Kwara Pilot success story was utilized by ESSPIN to sensitize and advocate for the rollout of the LGEA Database to the other 5 programme states. The States identified with the initiative and requested ESSPIN's support in the establishment of the database in their LGEAs.



Discussions and engagement that followed led to an agreement to embark on the rollout in phases from the 3rd quarter of 2014. The limitations of resources and low technical capacity of State and LGEA staff informed the choice of a phased rollout. Consideration was also given to the necessity for an optimal deployment of ESSPIN technical assistance to achieve the best result.

The agreement with the States for Phase 1 rollout included number of LGEAs to be covered per state, selection criteria, commitments to be fulfilled by the states, specifics of ESSPIN's support and timelines for rollout milestones. Four (4) LGEAs were covered in each of the 5 states in the plan for Phase 1 rollout. The selection criteria for LGEAs were agreed to be based on demand and commitment demonstrated by the timely provision of specified minimum requirements detailed in Table 2 below.

ESSPIN's commitment was agreed to be, software development, deployment and installation, training and capacity development of State and LGEA staff as well as support to database population, progression and use.

Phase 1 rollout was followed by Phase 2 rollout which commenced in the 2nd quarter of 2015. The same approach, strategy and criteria were applied in the implementation of the Phase 2 rollout. At the end of ESSPIN in January, 2017, the LGEA Education Management Database was successfully rolled out to 70 LGEAs across the six ESSPIN programme states- Jigawa, Kaduna, Kano, Enugu, Lagos and Kwara. Appendix 1 is a list of the 70 LGEAs.

Table 2: MoE, SUBEB and LGEA Requirements for LGEA Database Rollout

MDAs	Equipment and Facilities	State Personnel for Training & Capacity Development
LGEAs	Per LGEA: <ol style="list-style-type: none"> 3 Desktop Computer Workstations - capable of running Windows 7 or higher with a minimum of 1GB of RAM 1 Server - Microsoft SQL server 2008 or higher and Microsoft Office 2007 Service Pack 3 or higher 1No. LaserJet Printer Computers and Printers networked Secure EMIS Room Steady power (PHCN/Generator/Solar) 	Per LGEA: <ol style="list-style-type: none"> 2 Regular EMIS Staff 8 LGEA SSOs and SMOs 4 Quality assurance Evaluators.
SUBEB	<ol style="list-style-type: none"> 8 Desktop Computer Workstations 1 server 3Nos. LaserJet Printer Computers and Printers networked Secure EMIS Room 	<ol style="list-style-type: none"> 5 Regular EMIS Staff
Ministry	<ol style="list-style-type: none"> 8 Desktop Computer Workstations 1 server 3Nos. LaserJet Printer Computers and Printers networked Secure EMIS Room 	<ol style="list-style-type: none"> 10 Regular EMIS Staff 4 Quality Assurance Report Data Entry Staff

Achievements of LGEA Database Initiative

State and LGEAs commitment and ownership are well demonstrated and evident. All 6 states and 70 LGEAs met the stipulated requirements for the rollout. The computers, printers, generators and other IT equipment and facilities required for the database rollout in the 70 LGEAs were procured and provided by the partner state governments and LGAs. Funding provisions have also been made by the states to consolidate functionality of existing LGEA databases and to rollout in additional LGEAs through state budgets, GPE-NIPEP (in Jigawa, kano and Kaduna State) and Mercy Corps (in Kano State).

State and LGEAs' capacity for EMIS and sector performance monitoring and reporting has been strengthened through the LGEA education management database initiative. There has been significant progress in the EMIS decentralisation and data quality improvement facilitated by the LGEA database initiative. ASC Data entry and analyses are increasingly being decentralized to LGEAs. Since the 2014/15 ASC cycle, data entry in Kwara State has been fully decentralized to the 16 LGEAs. For 2015/16 cycle, these processes were decentralized to varying number of LGEAs across Kaduna, Kano, Enugu and Lagos states. This development is shortening ASC completion timelines and improving data quality.

Prior to the intervention, much of LGEA data collection, collation and recording was done manually, filled out on paper and stored in hard copy files. The digital database has improved these processes. Each LGEA has its own database and can manage and utilize this independent of an Internet connection and linkage to the State EMIS database. It gives the LGEAs a stronger sense of ownership of the data and information of schools under their authority.



Scale-up and Sustainability Strategy

The initiative has improved the availability and robustness of LGEA-specific data, information and evidence. The LGEAs and a variety of stakeholders have easier access to more credible and comprehensive LGA-level data to support basic school improvement more effectively. There is increased LGEA ownership, responsibility and transparency in data usage to improve performance monitoring and school supervision.

The LGEA Database has impacted positively on personnel management and administration because of improved personnel record keeping, retrieval and usage. A good example is the use of the database by Kwara State to discover over 2000 ghost staff in 2015. In addition, teachers professional training and career progression are now better documented thereby supporting improvements in teaching quality.

The scale-up and sustainability of LGEA education management database is embedded within ESSPIN's EMIS sustainability strategy. The objective of the strategy is to ensure effective State ownership of functional EMIS and effective use of reliable data and evidence to drive and sustain school improvement beyond ESSPIN. The strategy adopts a multi-faceted approach for a coordinated and sustained continuous institutional capacity development and systems strengthening at state and LGEA levels. The key components of this strategy are:

Engagement with UNICEF, USAID, EDOREN, World Bank and other relevant International Development Partners (IDPs) and programmes to forge collaboration and coordination in supporting national, states and LGEA EMIS capacity development in Nigeria.

Engagement with FME and States to review and streamline national EMIS/ASC policy, protocols and software regulations to ease bottlenecks, address governance and systems weaknesses, improve data quality, facilitate state ownership and enhance EMIS user-friendliness.

Collaboration with UNICEF in states' capacity development for the establishment and sustenance of a core team of technically competent state and LGEA staff to master and lead EMIS/ASC processes and deliverables with minimal development partners' support.

Link to LGEA Database Resource Materials

Conduct of a Nigeria National EMIS Capacity Assessment in collaboration with the Association for the Development of Education in Africa (ADEA), Federal Ministry of Education (FME), National Bureau of Statistics (NBS) and UNICEF as well as jointly implement the recommendations of the report.

Production of appropriate documentation including practice papers and user manuals to serve as resource materials to support continued professional development and good practice among state EMIS staff.

The LGEA Database resource materials are backed up on the ESSPIN website.

The resource materials are also available to the state teams through this link: [LGEA Database Resource Materials](#).

Appendix: Summary of LGEA Database Rollout by States

Enugu	Lagos	Kwara	Jigawa	Kaduna	Kano
1. Enugu East	1. Alimosho	1. ASA	1. Birnin Kudu	1. Birnin Gwari	1. Fagge
2. Udenu	2. Eti Osa	2. Ifelodun	2. Gumel	2. Chikun	2. Kombosto
3. Igbo-eze North	3. Lagos Island	3. Irepodun	3. Hadejia	3. Giwa	3. Dala
4. Nkanu East	4. Oshodi-Isolo	4. Offa	4. Kazaure	4. Igabi	4. Nassarawa
5. Oji-River	5. Agege	5. Baruten		5. Ikara	5. Gwale
	6. Ibeju Lekki	6. Ilorin East		6. Jaba	6. Tarauni
	7. Lagos Mainland	7. Isin		7. Jema'a	
	8. Shomolu	8. Oke Ero		8. Kachia	
	9. Badagry	9. Edu		9. Kaduna North	
	10. Ifako- Ijaye	10. Ilorin South		10. Kaduna South	
	11. Mushin	11. Kaiama		11. Kagarko	
	12. Surulere	12. Oyun		12. Kajuru	
	13. Epe	13. Ekiti		13. Kaura	
	14. Kosofe	14. Ilorin West		14. Kubau	
	15. Ojo	15. Moro		15. Kudan	
		16. Patigi		16. Lere	
				17. Makarfi	
				18. Sabon Gari	
				19. Sanga	
				20. Soba	
				21. Zangon Kataf	
				22. Zaria	
				23. Kauru	
5	15	16	4	23	7
Total			70		

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