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*EdData II*

# Task Order 22: Nigeria Education Data Survey Project (NEDS 2010 *Plus*)

## Final Report

August 7, 2014

**EdData II Technical and Managerial Assistance, Task 22**  
**Task Order Number EHC-E-00-04-004-00**  
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# Task Order 22: Nigeria Education Data Survey Project (NEDS 2010 *Plus*)

## Final Report

August 7, 2014

USAID|Nigeria

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## List of Acronyms

CEO	Chief Executive Officer
DFID	UK Department for International Development
DHS	Demographic and Health Survey
EMIS	education management information system
ESSPIN	Education Sector Support Programme in Nigeria
FCT	Federal Capital Territory
FMOE	Federal Ministry of Education (national level)
GAR	gross attendance rates
GIS	geographic information system
M&E	monitoring and evaluation
MDA	ministry, department, and agency
MOE	Ministry of Education (state level)
MS	Microsoft
NC	North Carolina
NDES	2004 Nigeria DHS EdData Survey
NEDS	Nigeria Education Data Survey
NEDS 2010+	Nigeria Education Data Survey Project <i>Plus</i>
NEI	Northern Education Initiative
NEMIS	National Education Management Information System
Q2	Quarter 2
QA	quality assurance
QC	quality control
RARA	Reading and Access Research Activity
SQL	Structured Query Language
SUBEB	State Universal Basic Education Board
UK	United Kingdom
USAID	U.S. Agency for International Development
USB	universal serial bus
Y2	Year 2

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# Task Order 22

## Nigeria Education Data Survey Project (NEDS 2010 *Plus*)

### Final Progress Report

August 7, 2014

## 1. Overview

The NEDS 2010+ task order is designed to support the Nigeria Federal Ministry of Education (FMOE) in developing additional analyses of Nigeria Education Data Survey (NEDS) data and related activities involving mapping of the education sector and strengthening of the National Education Management Information Systems (NEMIS). As a complement to the 2010 NEDS, these analyses will provide education stakeholders and decision makers in Nigeria with accurate and timely data for education policy and program planning. RTI International ([www.rti.org](http://www.rti.org)) serves as the implementing partner in collaboration with the U.S. Agency for International Development (USAID) and the FMOE. The period of performance is from January 2013 to July 2014. A quarterly financial statement for the final quarter can be found in *Annex A*.

### 1.2 NEDS 2010 *Plus* Components

NEDS 2010+ consisted of three separate components: analysis of the NEDS 2010, an education sector mapping study, and capacity support to the FMOE's NEMIS unit.

- **Production of additional analyses and publications from the 2010 NEDS.** The 2010 NEDS, funded by USAID and the UK Department for International Development (DFID), provided a substantial amount of household-based education data that were needed in Nigeria. The data collected focused on key issues related to parental attitudes, preferences, and perceptions about the quality of and access to schools, as well as literacy levels of the children. However, much of the data from the 2010 NEDS has not been analyzed. Under NEDS 2010+, RTI developed the following analysis products:
  - Education profiles for each of the 36 states and the Federal Capital Territory (FCT);
  - An evaluation of early childhood education and reading skills;
  - Education profiles exploring factors associated with participation in Qur'anic, Tsangaya, and Islamiyya schooling; and
  - Briefs or brochures on the topics of education expenditures, distance and access to schooling, school choice, and children with disabilities.
- **Conduct of an education sector mapping at federal, state, local government, and donor levels.** For this activity, RTI reviewed the institutional roles and responsibilities of the FMOE and the various parastatals, as well as other

ministries, departments, and agencies (MDAs) that operate and support the delivery of formal basic education services. RTI, in collaboration with FMOE, fielded a team of researchers to undertake a careful review of background policy documents and key informant interviews. The analysis resulted in a two-part report: profiles of key MDAs at the federal and state levels in basic education (Universal Basic Education levels 1–9), and mapping diagrams detailing the roles and responsibilities of actors across each level as they relate to four key service areas: (1) teacher management, (2) curriculum delivery, (3) quality assurance, and (4) infrastructure and capital procurement.

- **Provision of capacity building for the staff of FMOE/NEMIS on the use of the education management information system (EMIS) Toolbox.** Building on the successful EMIS-strengthening work under the USAID-funded Nigeria Northern Education Initiative (NEI), RTI provided training and technical assistance to the NEMIS office under the FMOE in the use of the EMIS Toolbox. EMIS Toolbox is a data-mining software that takes existing databases and organizes the data for structured reporting requirements. The NEMIS training addressed various aspects, including data analysis, management of the data collection process, and design software.

## 2. Accomplishments Respective to the Scope of Work

### 2.1 Production and Dissemination of NEDS Analytic Reports.

The full suite of NEDS 2010+ State, Thematic, and Brochure Reports have been produced and shipped to Nigeria. RTI has conducted a full quality assurance and quality control (QA/QC) of the available materials, and a report on the quality of these reports was prepared (see *Annex B*). In total, the following number of documents was produced:

- 18,500 State Reports (500 copies per state x 37 states)
- 2,000 Thematic Reports (2 reports x 1,000 copies each)
- 40,000 Brochures (2 brochures x 20,000 copies each)
- 1,000 posters featuring state information from each State Report
- 100 USB flash drives containing all soft copies of the produced reports, posters, and materials.

In addition, the NEDS State Report Forum was rescheduled to July 21, 2014, in Abuja, to accommodate the Ministry of Education’s timetable for issuing invitations to state-level officers and representatives. The NEDS 2010+ State Report Forum signaled the culmination of the NEDS 2010+ reports activities. *Annex C* contains a copy of the notes from the Forum, along with the agenda, participant list, and PowerPoint presentation delivered.

During the afternoon session of the State Report Forum, participants were engaged specifically to answer the “so what” questions: How should this information be used to inform policies and programs, and what do the participants need to do to disseminate the reports to their state-level counterparts, the political and executive leadership? The consensus of the participants was as follows:

- Participants will convene the state EMIS to review the reports and outline actions (positive, negative, gaps).
- Federal offices will distribute these new reports to stakeholders.
- States are to develop a report distribution list or plan so these reports could be optimally accessed and used by the stakeholders.
- Participants would like future reports to also have zonal dissemination workshops, similar to this workshop, so more local participants can attend.
- Capacity-building opportunities for the analysis and report writing phase is desired.
- Participants from the states should report back from states to the NEDS 2010+ team about the quality and value of these reports, to help inform the 2015 reports and briefs.

In consultation with the FMOE, it was agreed that the distribution of reports and posters will reach the following beneficiaries listed under **Table 1**. The remaining sets of materials will be distributed to USAID and other international development partners (IDPs). In addition, every report has been uploaded to the [www.eddataglobal.org](http://www.eddataglobal.org) website for public dissemination. Lastly, Annex C contains a brief discussion about how NEDS 2015 will improve response rates for disability issues.

**Table 1. Distribution List of Government of Nigeria (GON) Counterparts**

S/N	NAME	No. of Reports
1.	President of Nigeria	1 set
2.	Vice President of Nigeria	1 set
3.	Senate President	1 set
4.	Speaker of the House of Representatives	1 set
5.	Chairman of Senate Committee and Education	1 set
6.	Chairman of House Committee and Education	1 set
7.	Chief Justice of Federation High Court	1 set
8.	Secretary to Government of the Federation	1 set
9.	Chief of Staff to the President	1 set

S/N	NAME	No. of Reports
10.	All 44 Ministers	44 sets
11.	All State MOE Commissioners	37 sets
12.	SUBEB Executive Chairman	37 Sets
13.	All State MOE PRS Department	74 sets
14.	All State SUBEB PRS Department	74 sets
15.	FMOE Parastatals	25 sets
16.	Departments in the FMOE	20 sets
17.	National Planning Commission	2 sets
18.	Head of Services	1 set
19.	University libraries (federal, private, and states)	Various
20.	Colleges of Education (federal and states)	Various

## 2.2 Education Sector Mapping Study

The education sector mapping study was completed in July 2014, and the report itself is in the process of being finalized. The final version will be ready for submission prior to the end of project closeout (August 7, 2014). Progress on the production of this report was hampered by the need to consolidate and assemble the sizable amount of data collected from the interviews and the documentation during the last quarter. The project team was able to consolidate the disparate information from each state into a structured chart, outlining key activities alongside MDA responsibilities. These charts form the basis of the relational-diagrams describing the roles and responsibilities among the various MDAs across each level (federal, state, and local government) for specific service delivery areas.

## 2.3 NEMIS Capacity Building

The NEMIS strengthening activity was completed upon the final training delivered in April 2014 by RTI's EMIS consultant, Mr. Adam Preston. **Annex D** contains the summary EMIS report, detailing activities and accomplishments to date and next steps envisioned for continuing NEMIS support. In addition, a complete set of training modules and technical documentation for the EMIS Toolbox is contained within **Annex E**.

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## **Annex B. NEDS 2010 Plus QUALITY CONTROL CHECKS**

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**Monday, June 2, 2014 – E. Kochetkova and E. Randolph**

**Friday, June 6, 2014 – E. Randolph**

In our initial quality checks on Monday, June 2<sup>nd</sup>, which included review of the two topic reports (5 of each, 10 in total) and 2 brochures (10 of each, 20 in total), all checks were 100% quality.

An earlier meeting with Sulona Reddy, I was provided with examples of the color, stock and text quality to compare to. The Topic Reports and Brochures were consistent with these “models.” Admittedly the stock of the brochure was not “really strong;” however, it was consistent with what was agreed upon and the examples that Sulona provided. The color and integrity of the brochure was top-notch for the stock it was used.

As discussed per telephone conversation, Paarl Media stopped printing the State Reports because of the “cut mark” on the front page. A picture was provided from E. Kochetkova. E. Kochetkova and Randolph agreed that it was a minimal distraction and that to cut the booklets in further per the cut-mark would compromise the reports in that you would not be able to see the double digit page marks (i.e., the zero of the page 10 given in a red block at top of page would be cut off).

This was also considered to be a design problem rather than a printing issue, thus sourced from the graphics designer at RTI. The recommendation was for Paarl to go ahead so as not to delay shipment.

Thus Randolph returned to the Paarl factory (actually it was not in Milnerton, but in the town of Paarl itself, about 1 ½ to 2 hours from Simon’s Town.)

On Friday, June 6<sup>th</sup>, Randolph returned to the Paarl factory to provide the quality checks of 74 State Reports (2 each of 37 State Reports).

Of these 37, 1 had a scratch on the back side, one had a small disruption on one edge (seemingly due to an aggressive shrink wrap in the bundle), and four had a few very small (almost impossible to see unless you look carefully) dents on the back. This seemed like it might be related to a shrink-wrapped bundle being sat down on a slightly rough surface and when other bundles were packed on top, the weight caused the bottom report to squash on this rough surface and cause these very small dents. Randolph went back through all 74 reports to ensure that the correct number of these of the QA batch was identified. Only four were identified and again, this was very hard to see with the naked eye.

All reports had a crop mark on the outside edge on the right, some of these also showed up on the pages within. As discussed above, a decision was to go ahead and print as the issue was minimal and reportedly, a design specification error, not an error of the printers.

One report had a printer mark which was, according to David Samuel, the account manager is very rare. The printer mark was a white band on the back outer edge that had the number 2 printed on it. These are normally removed by hand during production.

See the report of the QUALITY CONTROL CHECKLISTS below.

**June 6, 2014**

**Table B-1. State Reports – 37 Reports with 500 Copies of Each = 18,500 Reports**

X	All 74 reports are consistent in size and shape
X	Reports are of equal quality to dummy report
X	All reports are printed with high quality ink and there is no sign of discoloration
X	Shading- text pictures, and graphics are all visible and easy to read
X	All reports have strong binding
■	Pages are trimmed with no fraying around the binding <i>(1/74 had a scratch; 1/74 had a squashed edge about 1inch in length; 4/74 had 4-6 tiny little dents almost invisible to the eye on the back)</i>
X	Margin are consistent throughout all the reports
X	No pages are folded, torn, or loose
■	No visible crop or printer mark <i>(All reports had a crop mark on the outside edge on the right, some of these also showed up on the pages within. As discussed above, a decision was to go ahead and print as the issue was minimal and reportedly, a design specification error, not an error of the printers. One report had a printer mark which was, according to David Samuel, the account manager is very rare. The printer mark was a white band on the back outer edge that had the number 2 printed on it. These are normally removed by hand during production.)</i>

**June 2, 2014**

**Table B-2. Topic Reports – 2 Reports with 1,000 Copies of Each = 2, 000 Reports**

X	All 10 reports are consistent in size and shape
X	Reports are be of equal quality to dummy report
X	All reports are printed with high quality ink and there is no sign of discoloration
X	Shading- text pictures, and graphics are all visible and easy to read
X	All reports have strong binding (Acceptable, not great
X	Pages are trimmed with no fraying around the binding
X	Margin are consistent throughout all the reports
X	No pages are folded, torn, or loose
X	No visible crop or printer marks

**June 2, 2014**

**Table B-3. Brochures – 2 Brochures with 20, 000 Copies of Each = 40, 000 Brochures**

X	All 20 reports are consistent in size and shape
X	Reports are of equal quality to dummy report
X	All reports are printed with high quality ink and there is no sign of discoloration
X	Shading- text pictures, and graphics are all visible and easy to read
X	Clear crease to make three equal parts for tri-fold
X	Pages are trimmed with no fraying around the binding
X	Margin are consistent throughout all the reports
X	No pages are folded or torn

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## **Annex C(a). Notes from the NEDS 2010 Plus State Report Release Workshop**

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**July 21, 2014. Abuja, Nigeria**

Attached to this document are the agenda, slides, attendee lists, and other information relevant to the workshop. Per the agenda schedule, the morning began with registration and dissemination of reports (hardcopy and electronic) and welcoming messages by all of the honored guests and speakers. RTI's Senior Statistician and Research Advisor, Karol Krotki, presented an overview of the NEDS methodology, why this survey and data is special, and a brief review of the new reports being launched before the morning tea break. Members of the press attended the morning session.

Throughout the morning, organizers distributed the state report documents, profile reports, posters, and flash drives. Workshop participants remarked that hardcopy products looked to be of very professional quality and noted they were pleased with the accessibility of the data presented using data visualization techniques.

After the tea break, Krotki presented an in-depth discussion of the methods and how this survey is different from a school-based survey and presented some national and state comparisons. RTI's Education Research Analyst, Cynthia Augustine, discussed the contents of the topical briefs and brochures and reviewed the contents of the state reports. Following the presentations by Krotki and Augustine and before lunch, an extensive floor discussion ensued that involved questions from participants asking for clarification, suggesting improvements, and proposing next steps. After lunch, the participants reviewed the state reports in detail, page-by-page, to understand the new presentation style and how to use the data to guide policy decisions. The consensus of the group was that the new graphical presentation style was pleasant and useful. The link between the graphical presentation in the main report and the links to the specific annex tables were discussed. Participants asked questions about the representative nature of the sample, the definition of urban and rural for the survey, the relationship of the Annual School Census to NEDS, the calculation of the Gross Attendance Rates (GAR) and census counts, among other issues.

Augustine and Krotki each had a discussion with a deaf participant, who indicated an interest in the special needs/disability questions for the 2015 survey. Augustine exchanged email addresses with him in hopes of better understanding the special needs population in Nigeria and how to capture accurate information going forward.

The participants were asked about changes or suggestions needed for the 2015 survey. One participant indicated that he would like more explicit interpretation of the results. The RTI team pointed out that each chart or graph has a research question written next to

it to help guide the reader in how the data can be used. That seemed helpful to the audience. No other suggestions were brought forward.

The website ([www.EdDataGlobal.org](http://www.EdDataGlobal.org)) and universal serial bus (USB)-drive containing the electronic copies of the report were referenced. Krotki noted that the NEDS data was also available on the website, and participants could access the dataset to conduct additional research.

The workshop concluded with a discussion of the next steps to be completed by the attendees. These items included the following:

- Participants will write a report of the activities and results from this workshop for each state.
- Participants will convene the state EMIS to review the reports and outline actions (positive, negative, gaps)
- Federal offices will distribute these new reports to stakeholders.
- States need to draft a report distribution list or plan so that these reports do not simply languish but rather can be used by the states and the stakeholders.
- Participants would like future reports to also have zonal dissemination workshops similar to this workshop so that more local participants can attend.
- Capacity building opportunity for the analysis and report writing phase is desired.
- Participants from the states should report back from states to the NEDS 2010+ team about the quality and value of these reports to help inform the 2015 reports and briefs.

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## ***Annex C(c). State Report Workshop Agenda***

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## LAUNCH OF THE NIGERIA EDUCATION DATA (NEDS) 2010 PLUS STATE REPORT DISSEMINATION WORKSHOP

NEDS 2010 *plus*: National Education Data Survey  
21 July 2014 • Sheraton Hotel, Abuja, FCT

### Objective:

A one day high level forum to present further analyses of the NEDS 2010 data, analyses that includes unique State Reports profiling the education status for every State and FCT in Nigeria. In addition, thematic reports on Access to Early Childhood Education and Literacy, and Participation in Qu'ranic Schooling will be shared, along with briefing papers on household education expenditures and distance and access to schooling.

21 July 2014		
<b>Morning Plenary</b>		
9:00-9:30	Arrival and Registration of Guests	
9:00-9:30	Arrival of the Honorable Minister or Representative	
9:30-9:35	National Anthem (Nigerian and American)	
9:35-9:55	Welcoming remarks <ul style="list-style-type: none"> <li>• Director (EPR&amp;D) FME</li> <li>• USAID Education Ag. Team Lead</li> </ul>	<b>Presenters:</b> Mrs. B. O. Momah Tim Curtin
9:55-10:05	Goodwill Message	National Population Commission DFID for all IDPs
10:05-10:15	Address/Launch of Report	Representative of the Honorable Minister of Education
10:15-10:25	Closing Remarks	Mr. R. Drake Warrick, RTI International
10:25-10:30	Vote of Thanks	Permanent Secretary, Federal Ministry of Education
10:30-10:45	<b>Tea and Snack Break</b>	
10:45-12:30	Overview of NEDS methodology and guidelines for interpreting reports and findings <ul style="list-style-type: none"> <li>• Methodology and descriptive statistics</li> <li>• State Reports and State Posters</li> <li>• Early Childhood and Literacy Report</li> <li>• Religious Schooling Report</li> <li>• Access and Distance Brief</li> <li>• Household Expenditure Brief</li> <li>• Floor Discussion</li> </ul>	<b>Presenters:</b> Mr. Karol Krotki Ms. Cynthia Augustine
12:30 – 1:30	<b>Lunch</b>	
1:30-2:30	<ul style="list-style-type: none"> <li>• Study of State Results and Thematic Reports</li> <li>• Main conclusions</li> <li>• Policy Implications</li> <li>• Lessons for NEDS2015</li> </ul>	<b>Work Groups</b>

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2:30-3:30	<b>Conclusion</b> <ul style="list-style-type: none"> <li>• Discussion, Q&amp;A</li> <li>• Policy Implications</li> <li>• Lessons for NEDS 2015</li> </ul>	<b>Plenary Wrap up</b>
	Departure	

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## ***Annex C(d). The Nigeria Education Data Survey and Children with Disabilities***

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The 2010 Nigerian Education Data Survey (NEDS) was a large-scale household survey that was conducted to determine children's participation in schooling and their parents' attitudes toward this participation. It was similar to the 2004 Nigeria Demographic and Health Survey (DHS) EdData Survey (NDES) in that it was designed to provide information on education for children ages 4–16, focusing on factors influencing household decisions about children's schooling. NEDS was conducted by the Nigerian National Population Commission in conjunction with the Federal Ministry of Education, USAID, and UK Department of International Development (DFID). Although NEDS was a national survey, it was designed to also be representative and have sufficient statistical precision at the state level. This survey was unique in its response rate of 97.9%. A total of 26,934 households responded out of a sample of 27,512 households.

In the NEDS 2010+ report, the weighted number of disabled children included was only 580 for the entire country. This is less than one percentage of Nigeria's child population. The NEDS 2010+ report attempted to show the prevalence of disability by age, gender, type of disability, residence, and region. However, given the very small sample size, any further analysis of attendance, education expenditure, school access, or school quality would not be statistically valid or aid in education policy decisions. RTI believes the issue of education for disabled children is important and would be better served by an essay about disabled children that will explore the ways in which the survey can be improved in NEDS 2015 to capture information about this population.

In lieu of a brief, this essay discusses the main factor we believe leads to an underreporting of disabled children. There may be several factors leading to the small number of disabled children that were included in the NEDS 2010+ survey. The questionnaire wording should be reevaluated to ensure that the question is clear and is also being asked in a sensitive and culturally appropriate manner. Parents may deny that their child is disabled because they misunderstand the question or because they are embarrassed. However, information about their child's disability is important to be able to identify any educational disparities and take action to reduce them.

The NEDS 2010+ questionnaire contained only one question about disability, which was as follows:

205	Does (NAME) have any serious disabilities? CODE ALL THAT APPLY.	Seeing..... A Hearing..... B Speaking..... C Mobility..... D Mental..... E Other (SPECIFY)..... F NONE..... G	
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The questionnaire required the enumerator to ask how many children in the household are of school age. For each child, the enumerator asks the respondent the following question: “Does the child have any serious disabilities?” This was an open-ended question in which the respondent was to identify all disabilities the child had. The enumerator was given the response options A to E to code. If “Other” (F) was identified, the enumerator was to write in the disability type.

The positive responses to the NEDS 2010+ questions on disability were low compared to the rate of disability in the United States. According to the American Community Survey, the prevalence of disability for children ages 5–15 years is 5.3%.<sup>1</sup> The rate of disability for adults in the United States is 12.1%. Table 1 provides the frequency of positive responses for each response option. Given that most respondents answered “no,” rather than “don’t know/refuse,” indicates that people were probably not truthful.

**Table 1. Frequency of responses to disability question.**

Disability Type	Number “Yes”	Percentage “Yes”	Number Missing	Percentage Missing
Seeing	73	0.10	280	0.39
Hearing	91	0.13	280	0.39
Speaking	96	0.13	280	0.39
Mobility	112	0.16	280	0.39
Mental	52	0.07	280	0.39
Other	217	0.30	280	0.39
NONE	70,747	98.80	280	0.39

There are several issues with this question that could be leading to higher than expected “none” responses. These issues would affect the reliability of this item in determining the degree of disability among household children in general. First, the word “serious” might be too harsh here and requires a subjective interpretation of its definition if a definition is

<sup>1</sup> [www.disabilitystatistics.org](http://www.disabilitystatistics.org). Accessed on July 29, 2014.

not otherwise provided. Secondly, it relies on the respondent to identify unprompted the variety of disabilities that may affect or afflict the child. Third, it does not relate the disability to the child's ability to participate in schooling or learning.

To gain a better understanding of the true disabled population in Nigeria, the NEDS 2015 survey needs to be improved in two specific ways. First, the enumerator should provide a brief preamble to the disability questions that includes a clear definition of disability in the NEDS context, and secondly, should enumerate each disability type in separate YES/NO questions.

Proposed language for the preamble/introductory passage could include, for example:

*Some children have disabilities or special needs that make daily life, attending school, or learning in the classroom very difficult. It is important for the government to know about the difficulties that all children face so schooling and assistance may be provided to them. The following set of questions is designed to help the government understand the nature and extent to which children have serious disabilities. It is of utmost importance that you answer each question to the best of your knowledge.*

1. Does (Name) have problems seeing that could not be fixed by glasses? YES NO
2. Does (Name) have problems hearing that require him/her to use a hearing aid, communicate by sign language, or by some other way? YES NO
3. Does (Name) have problems speaking? YES NO
4. Does (Name) have problems walking or being able to move from a bed to a chair? YES NO
5. Does (Name) have mental or emotional problems that make it hard for him/her to learn, follow instructions, be part of a group, or participate in household activities? YES NO
6. Does (Name) have other special needs we did not discuss? What are they? YES NO. Specify:

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## **Annex C(e). State Report Forum Workshop**

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The Nigeria Education Data (NEDS) 2010 +

### **State Report Forum**

July 21, 2014

Prepared by Mitchell Rakusin, Karol Krotki, Cynthia Augustine  
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#### **About the Presentation**

- This presentation was prepared for The State Report Forum at the Sheraton Hotel, Abuja on 21 July 2014. The forum was organized by the RTI International for the Honourable Minister of Education and working groups of state education specialists.
- The USAID EdData II project is led by RTI International. NEDS 2010 is EdData II Task Order Number X, EHC-E-0X-04-00004-00.

### **Morning Session Outline**

- Arrival and Registration
- National Anthem
- Welcoming Remarks
- Goodwill Message
- Address / Launch of Report
- Closing Remarks
- Vote of Thanks
- Morning Tea Break

### **National Anthem: Arise, O Compatriots**

Arise, O compatriots, Nigeria's call obey  
To serve our Fatherland  
With love and strength and faith. The labour of  
our heroes past Shall never be in vain,  
To serve with heart and might  
One nation bound in freedom, peace and unity.

O God of creation Direct our noble cause  
Guide our leaders right  
Help our youth the truth to know  
In love and honesty to grow  
And living just and true  
Great lofty heights attain  
To build a nation where peace  
And justice shall reign.

## Outline of Discussion

- Methodology and Descriptive Statistics
- Early Childhood and Literacy Report
- Religious Schooling Report
- Access and Distance Brief
- Household Expenditure Brief
- State Reports and State Posters
- Floor Discussion

## Overview of NEDS Methodology

- The 2010 NEDS is similar to the 2004 Nigeria DHS EdData Survey (NDES) in that it was designed to provide information on education for children age 4–16, focusing on factors influencing household decisions about children’s schooling.
- Conducted by National Population Commission in conjunction with the FMOE, USAID and UKAid.
- Large scale household survey of parental attitudes toward and their children’s participation in schooling
  - 26,934 households responded out of a total of 27,512 targeted
  - Response rate of 97.9 percent
  - Representative results for all 37 states in Nigeria, including FCT

## Overview of NEDS Methodology

- The NEDS Plus reports take the original NEDS 2010 reports further by providing unique reports for each State and reports on certain topic areas.
- NEDS is a Household survey
  - Compliments MOE EMIS and school-based surveys
  - Allows perspective of parents, including expenditure
  - Understand reasons for students not attending school and why students dropout
- NEDS results at the State level will allow states to better understand how they compare with their peers in their geo-political zone on key indicators.

## Descriptive Statistics - Interviews

Number of households, number of interviews, and response rates of de jure individuals and children, according to residence, 2010 NEDS

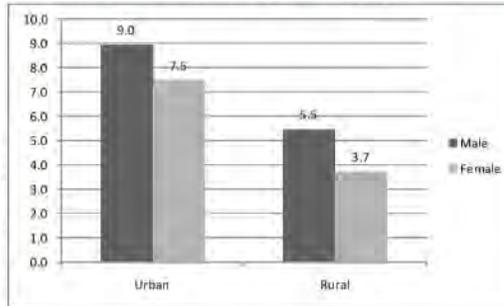
Result	Urban	Rural	Total
<b>Household Interviews</b>			
Households sampled	9,000	19,624	28,624
Households occupied	8,480	19,032	27,512
Interviews completed	8,351	18,583	26,934
Household response rate (percent)	98.48	97.64	97.90
<b>Parent/guardian Interviews</b>			
Eligible parent/guardians	8,447	18,776	27,223
Interviews completed	8,434	18,755	27,189
Parent/guardian response rate (percent)	99.85	99.89	99.88
<b>Children Age 4–12 Literacy and Numeracy Measures</b>			
Children age 4–12 identified	18,865	45,351	64,216
Children age 4–12 tested	17,505	40,654	58,159
Age 4–12 response rate (percent)	92.79	89.64	90.57

### Descriptive Statistics – Educational Attainment

Mean years of schooling of adult population

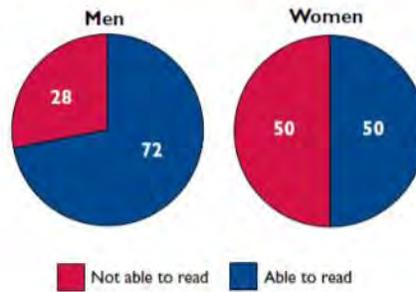
Region	Male	Female
North Central	6.9	4.5
North East	3.9	2.2
North West	4.4	2.1
South East	8.1	7.4
South South	9.2	7.6
South West	9.0	7.6

Mean years of schooling of adult population



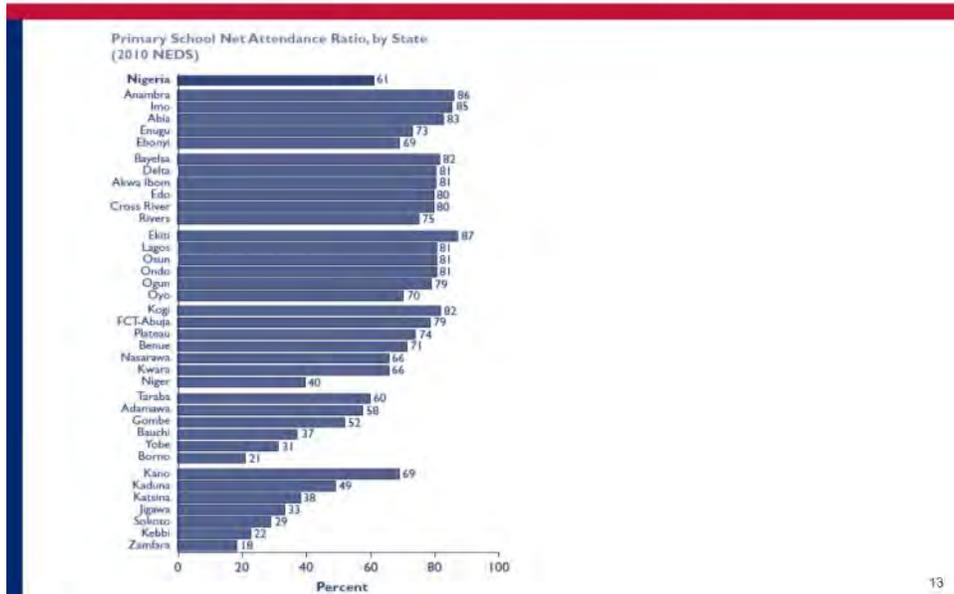
### Descriptive Statistics – Literacy among adults

Figure 2.2 Literacy among men age 25-59 and women Age 15-49



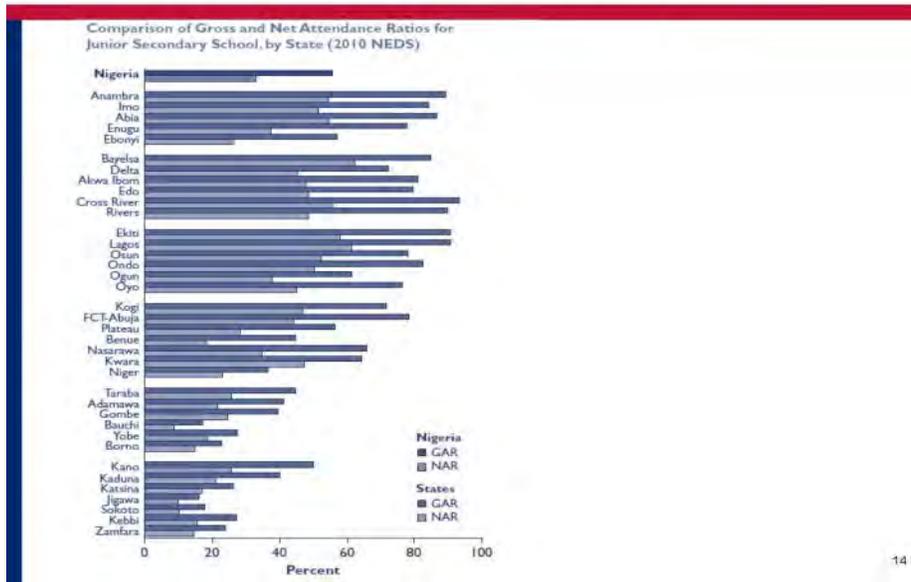


### Descriptive Statistics – Primary NAR By State



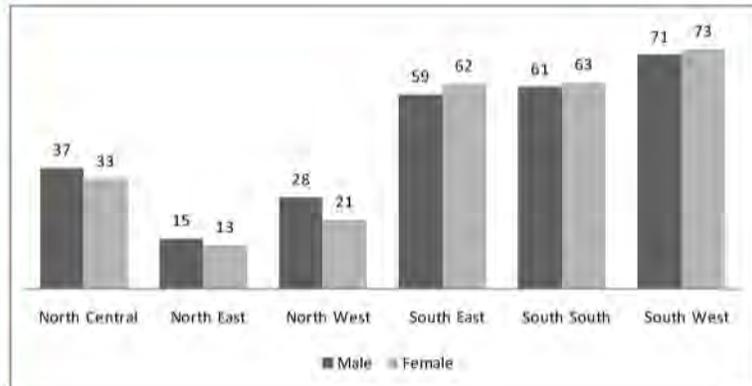
13

### Descriptive Statistics – JSS GAR & NAR By State



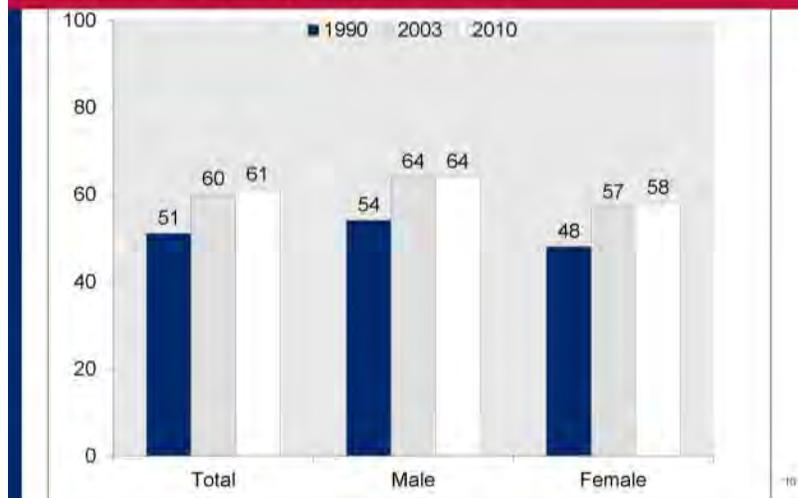
14

### Descriptive Statistics – Children Literacy



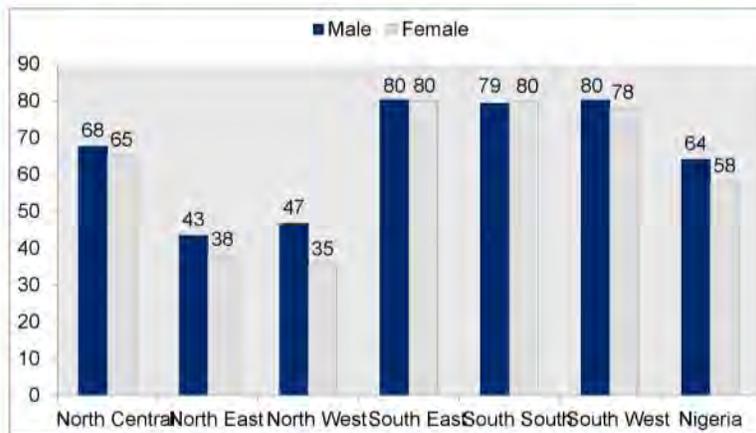
15

### Descriptive Statistics – Trends in Primary Net Attendance Ratio (NAR)



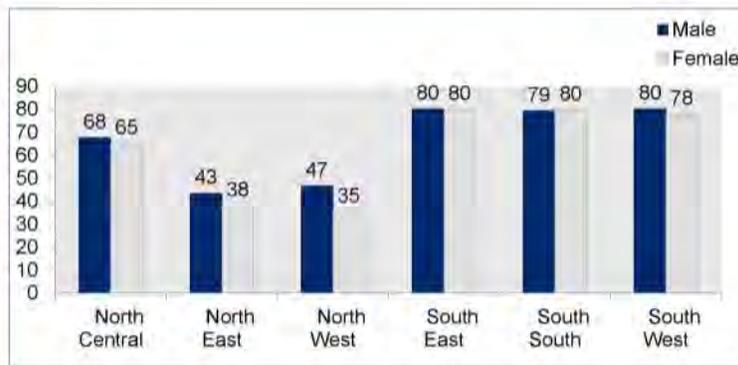
16

**Descriptive Statistics – Primary Net Attendance Ratio (NAR), by Region and Gender**



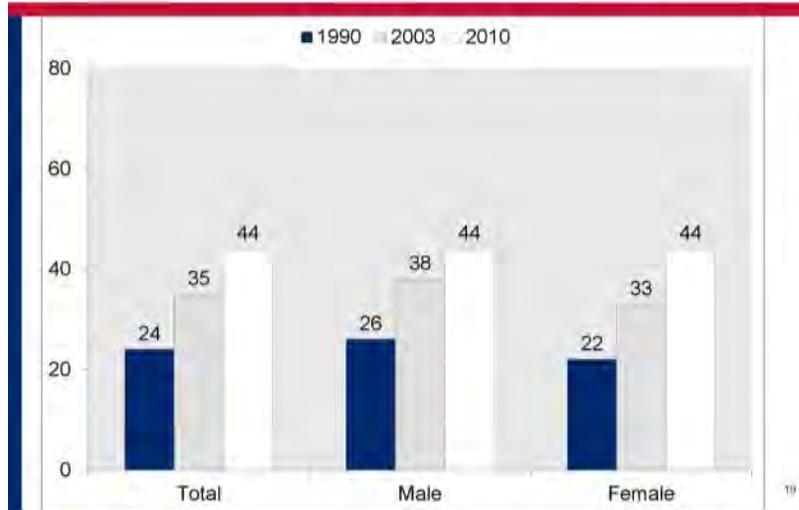
17

**Descriptive Statistics – Primary Gross Attendance Rate (GAR)**

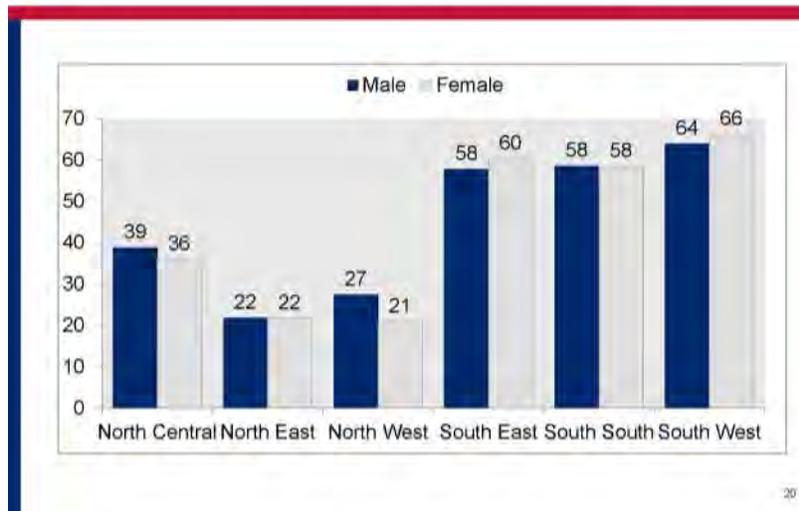


18

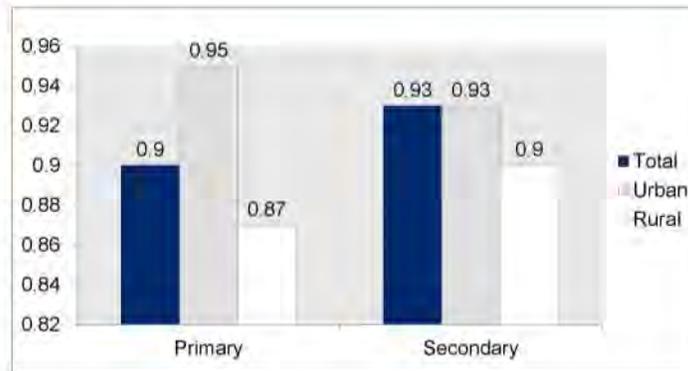
**Descriptive Statistics – Trends in Secondary NAR**



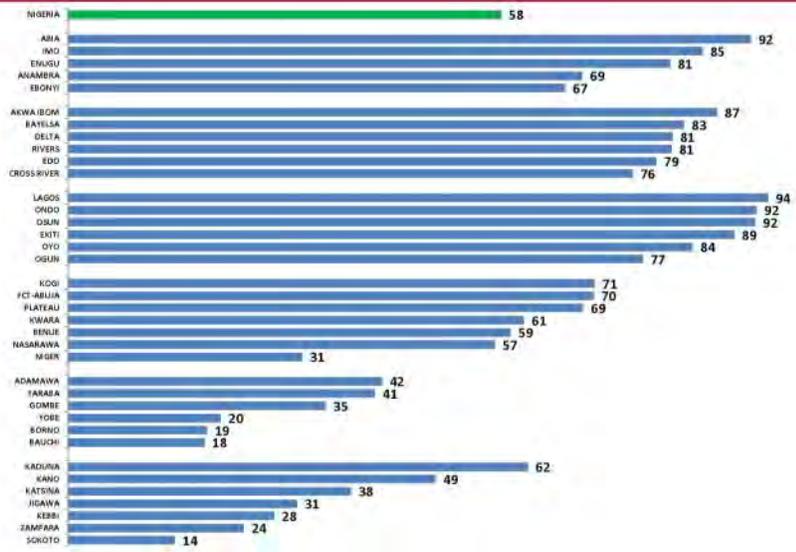
**Descriptive Statistics – Trends in Secondary NAR**



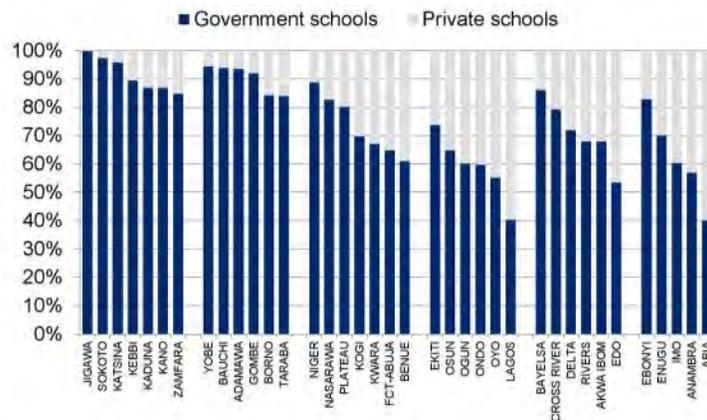
### Descriptive Statistics – Gender Parity Index (GPI)



### Descriptive Statistics – Percent Children Numerate



### Descriptive Statistics – Enrolment in Public & Private Primary Schools, by State



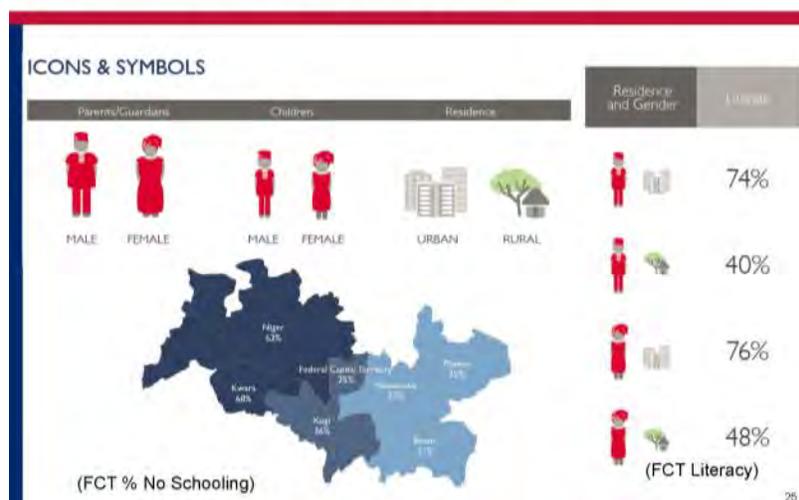
23

### Guidelines for Interpreting Reports & Findings

- State Reports and State Posters
  - States are shown with geo-political zones for comparative purposes
  - Highly visual report & posters for ease of interpretation
- Early Childhood and Literacy Report
  - Focuses on the importance of early childhood education in improving the age children reach literacy
- Religious Schooling Report
  - Shows the various educational opportunities with literacy as a key outcome
- Access and Distance Brief
  - Explores variation in walking time to schools
- Household Expenditure Brief
  - Breaks out cost of schooling by expenditure type

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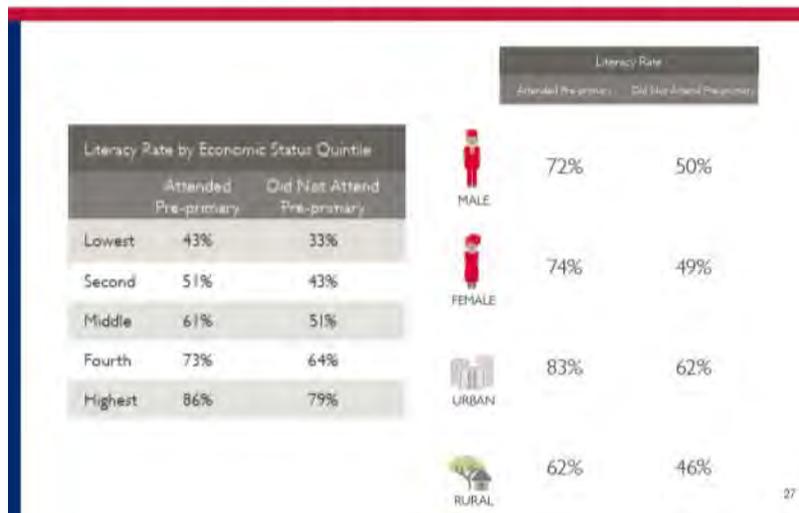
## Symbols in Reports, Posters & Briefs



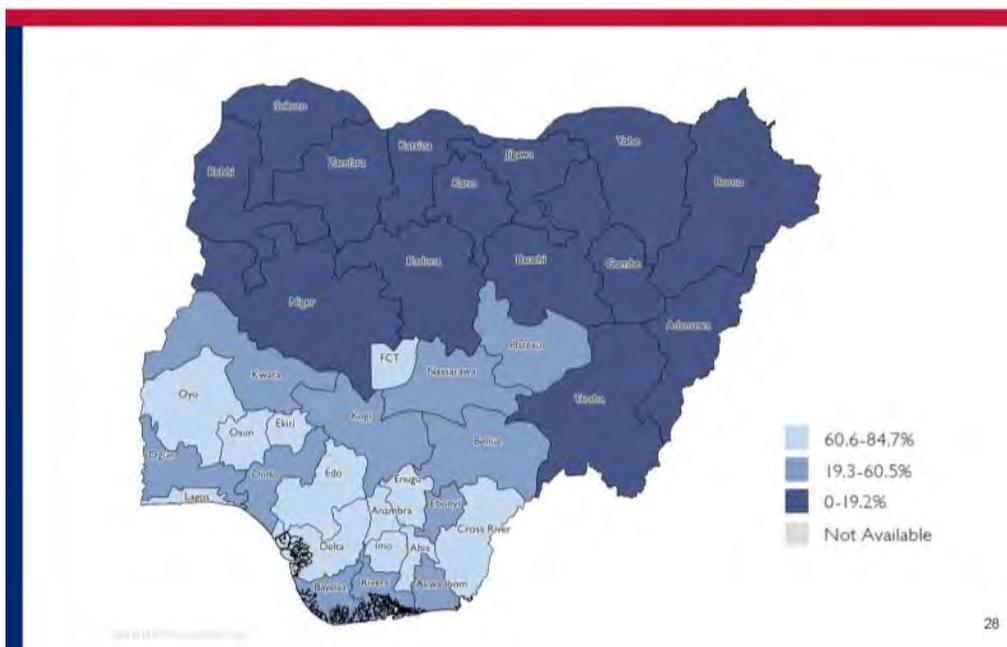
## Early Childhood Literacy Report – Outline

- Participation in Pre-Primary
  - NAR and GAR
- Expenditure on Pre-Primary Education
  - Government and Private Schools
- School Quality & Parent Perceptions
- Associations between Pre-Primary Attendance & Literacy
- Class level at which 50% of pupils can read

### Early Childhood Literacy Report – Literacy Rates



### Early Childhood Literacy Report – Pre-Primary NAR

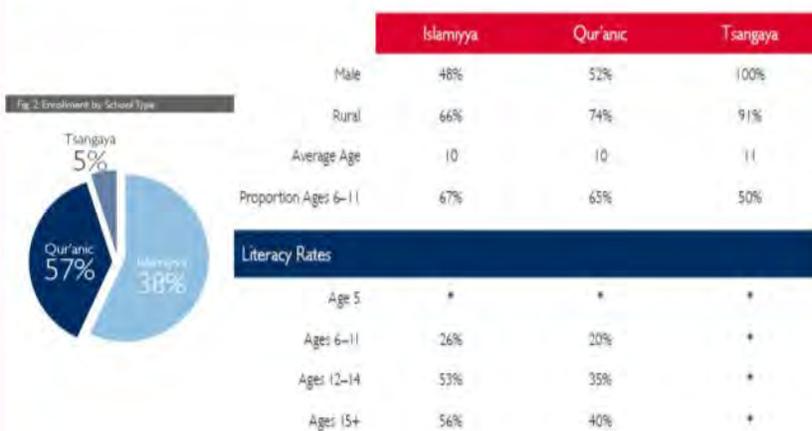


## Religious Schooling Report - Outline

- Distribution of Sampled Children by Religion and School Type
- Definitions of Religious School Types
- Participation in Religious Schools
- Integration of Formal Subjects or Participation in Formal Schooling
- Characteristics of Students in Religious Schools
- Religious Schooling Attendance by Region
- Joint participation in Formal and Religious Schooling

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## Religious Schooling Report – Enrolment & Characteristics



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## Religious Schooling Report – Religious School Attendance by Region

	Percent of Children Who Are Muslim	No Schooling	Formal School Only	Religious School Only	Formal & Religious Schools
NORTH CENTRAL	43%	12%	19%	20%	48%
NORTH EAST	82%	16%	8%	42%	34%
NORTH WEST	92%	7%	4%	42%	46%
SOUTH EAST	<1%	*	*	*	*
SOUTH SOUTH	3%	1%	67%	2%	31%
SOUTH WEST	41%	6%	39%	4%	51%

\* Too few children reported for a reliable estimate  
 † Note: Rows may not sum exactly to 100% due to rounding

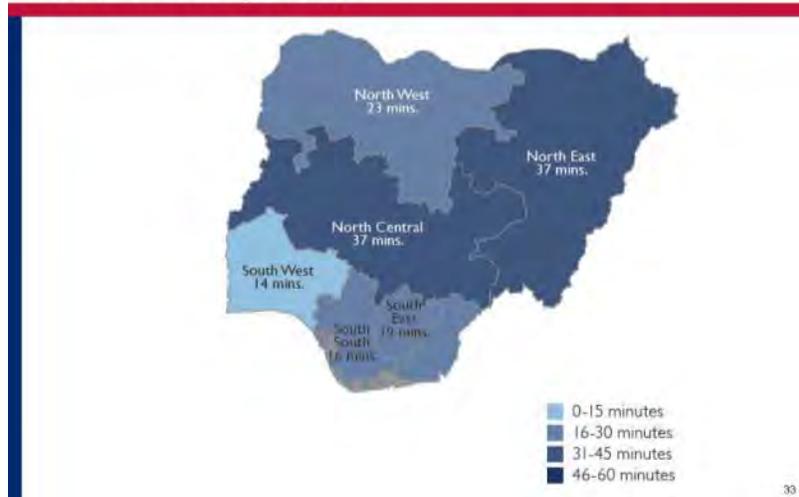
31

## Access and Distance Brief - Outline

- Map of mean walking time to nearest Primary School
- Students who walk to Primary School
  - By Government and Private School Types
  - By Region
- Enrolment Status & Walking time to nearest Primary School
  - By Region
  - Includes the walking time for those not attending school
- Chart focused on walking time for those not attending school

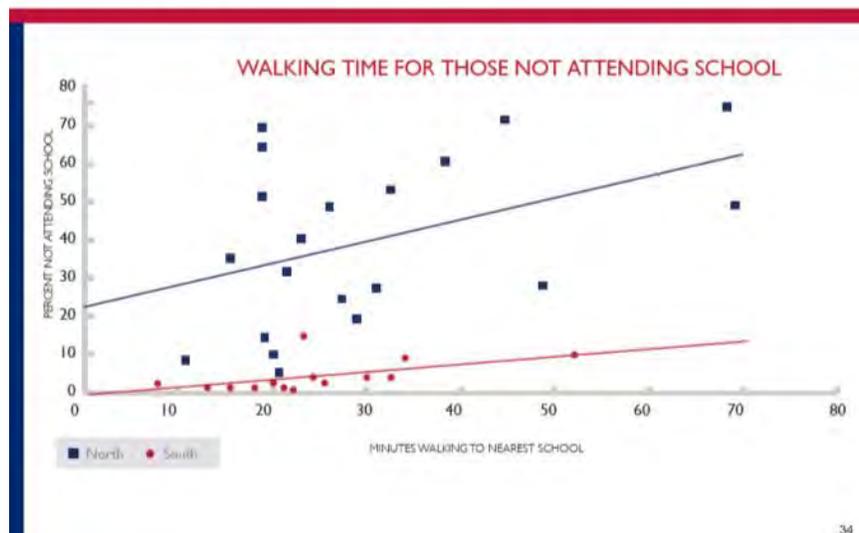
32

### Access and Distance Brief – Mean walking time to nearest Primary School



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### Access and Distance Brief

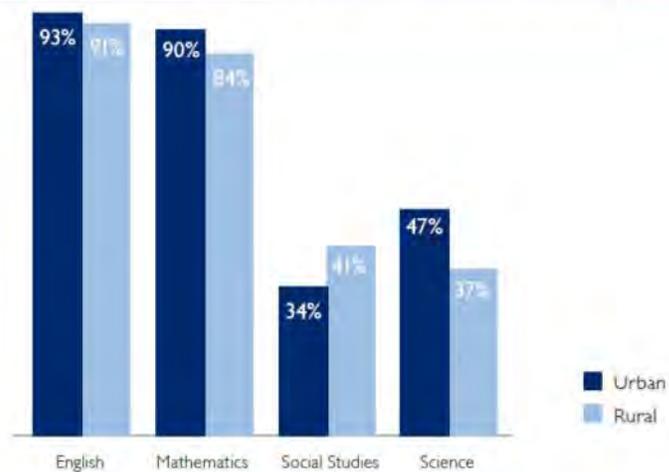


34

### Household Expenditure Brief - Outline

- Average per-pupil household expenditure (for primary school)
  - By Region, by Urban / Rural, by Gender
- Definitions of expenditure categories
  - Books & Supplies, Transport, Food, Extra Lessons, Fees & Other Costs
- Expenditure by category for Urban / Rural
- Associations between Attendance and Free Lunch
- Availability of Free Textbooks
  - By Subject and by Urban / Rural

### Household Expenditure Brief – Percentage of Students who receive free textbooks in Government Schools

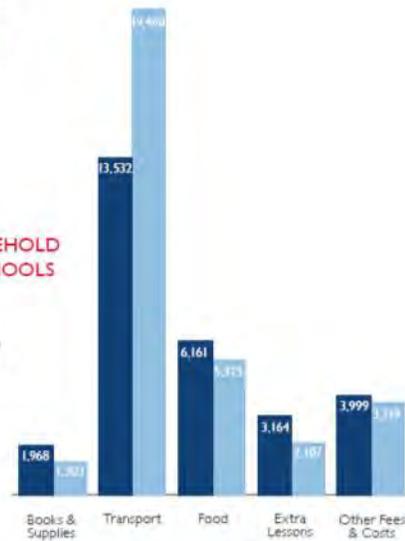


## Household Expenditure Brief

### PER-PUPIL CATEGORIES OF HOUSEHOLD EXPENDITURES FOR PRIMARY SCHOOLS

Expenditures in ₦

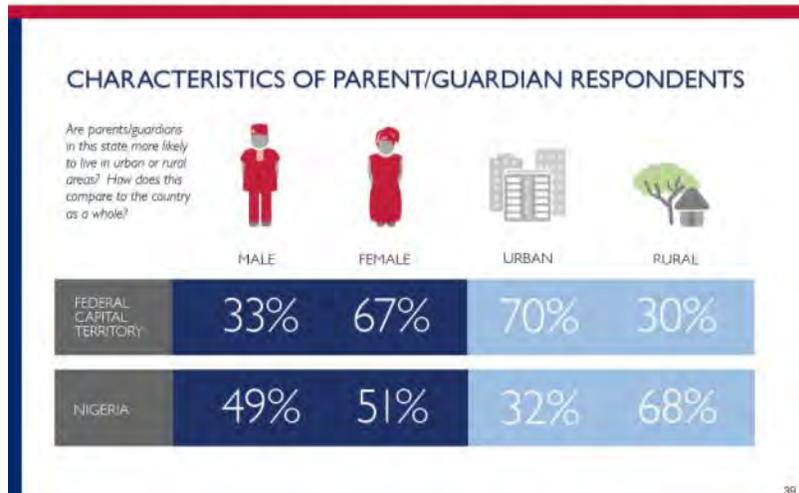
Urban  
Rural



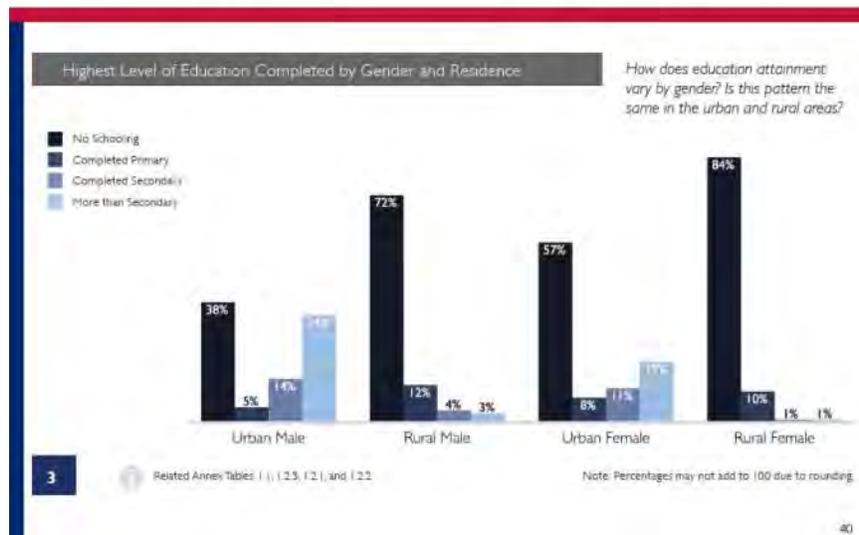
## State Reports – Outline

- Parents / Guardians – Demographics, Literacy, Educational Attainment
- Children – Demographics, Literacy Numeracy
- School Attendance Rates
- Proximity to Schools
- Factors Affecting Attendance
- Household Expenditures – Primary & Secondary
- Other Contributions
- School Quality Perceptions
- Absenteeism
- Annex

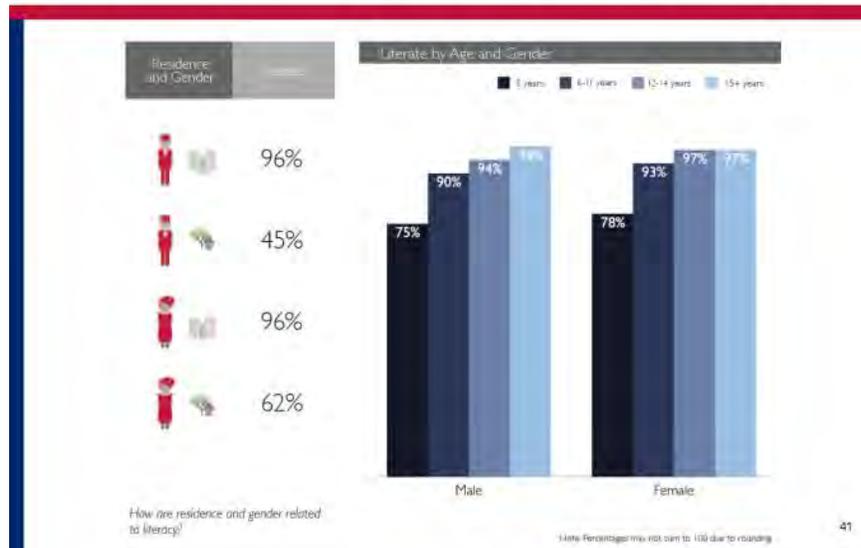
### State Report Results – Examples of Figures & Charts



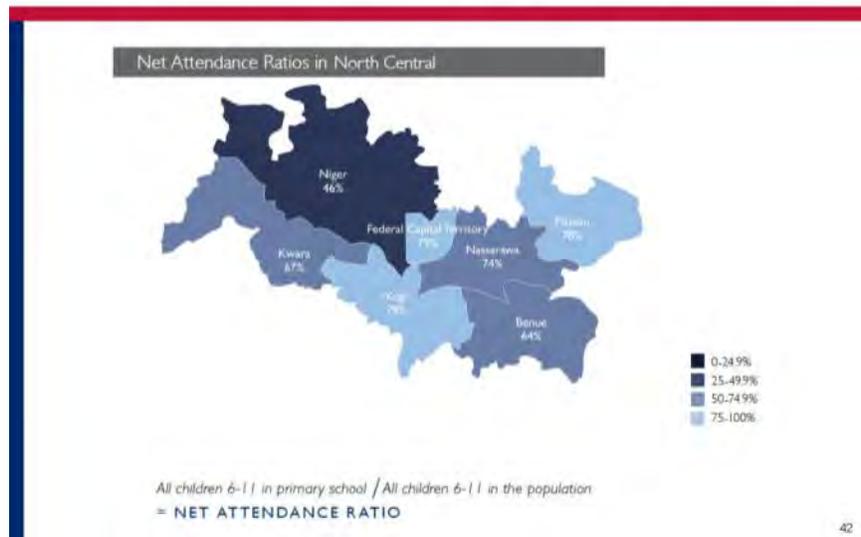
### State Report Results – Examples of Figures & Charts



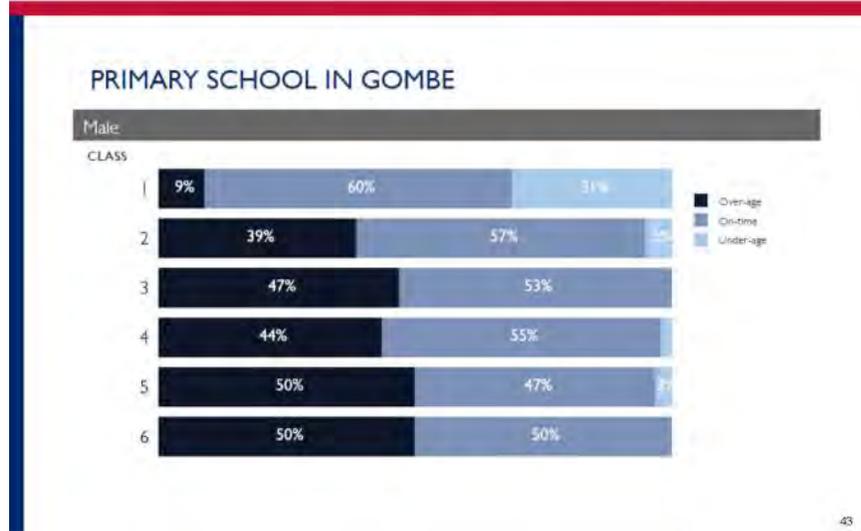
### State Report Results – Examples of Figures & Charts



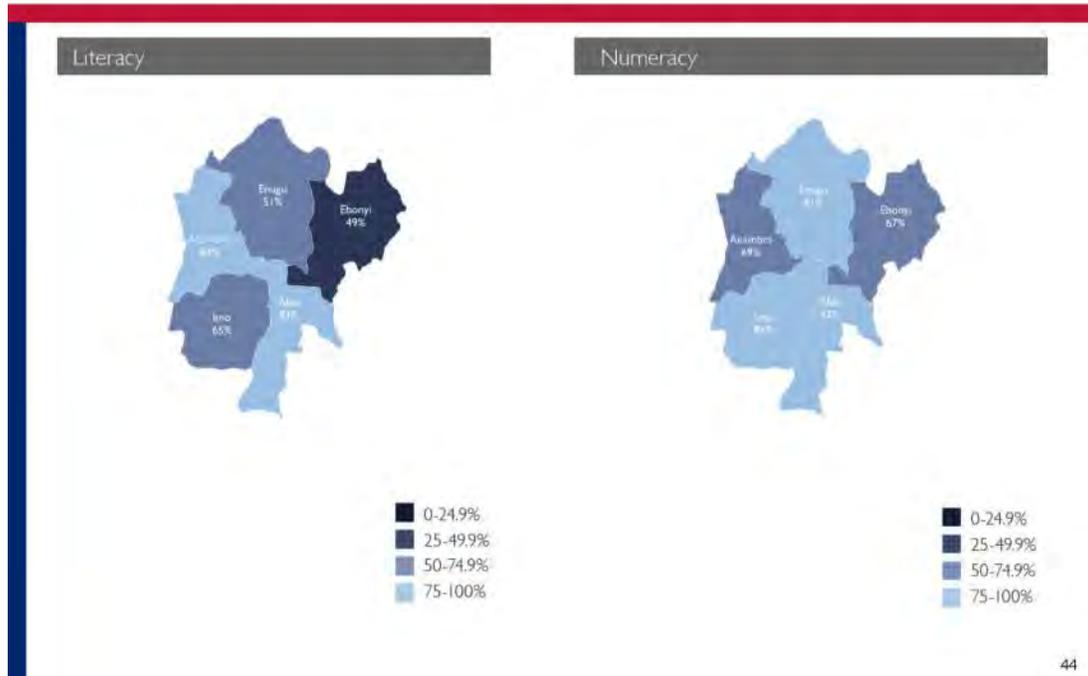
### State Report Results – Examples of Figures & Charts



### State Report Results – Examples of Figures & Charts



### State Report Results – Examples of Figures & Charts



## State Report Results – Examples of Figures & Charts

### Top Reasons for Having Never Attended School

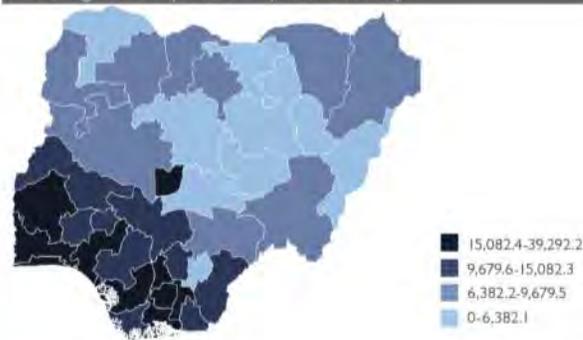
	ENUGU	SOUTH EAST	NIGERIA
Other Factors	27%	10%	27%
Labor Needed	25%	29%	32%
Monetary Cost	22%	20%	25%
No Interest	13%	8%	10%
Disabled	13%	7%	1%

*What reasons were cited most frequently for having never attended school? How do the reasons differ by gender and residences in this state?*

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## State Report Results – Examples of Figures & Charts

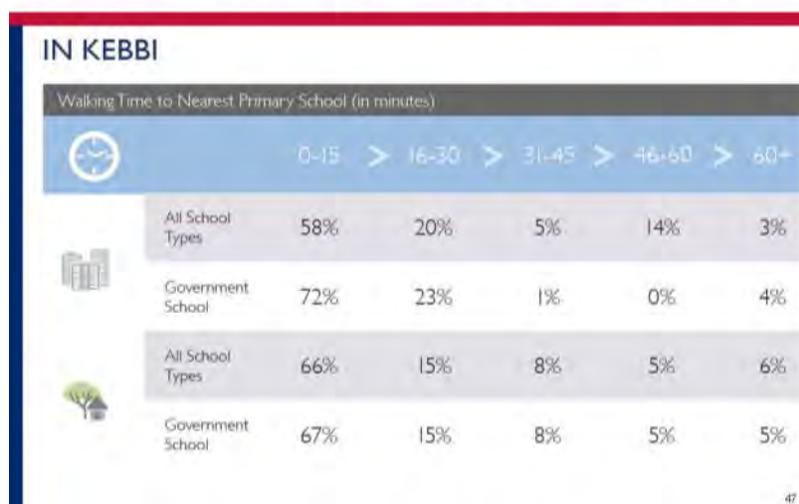
### Average Total Expenditure by State Annually



Related Annex Tables: 6.1, 6.3, and 6.2

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## State Report Results – Examples of Figures &amp; Charts



## State Report Results – Annex Tables

## 7.2.1: Time primary school pupils spent on homework in Cross River

Percentage distribution de jure primary day pupils age 5-16 by whether pupil did homework outside school and time spent per week on homework by class and background characteristics, NEDS, 2010

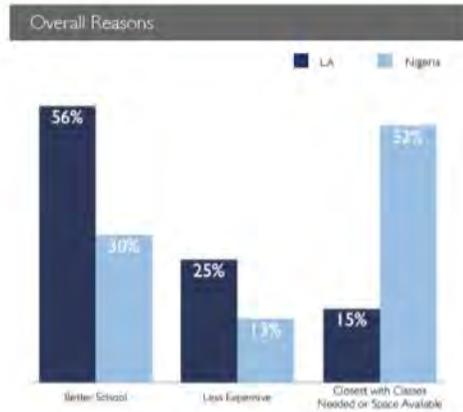
	No homework	Up to 3	More than 4	Don't Know / missing	Mean hours spent on homework per week	Number of day pupils
<b>Class</b>						
1	55.8	31.8	4.8	6.0	1.9	113
2	35.8	56.0	2.1	4.9	1.6	124
3	11.2	75.3	5.1	5.6	1.9	119
4	5.1	81.8	3.8	7.3	1.8	105
5	3.8	75.1	6.1	6.1	2.4	88
6	1.7	85.8	3.1	2.9	1.8	90
<b>Sex</b>						
Male	20.6	66.9	5.2	4.6	1.9	343
Female	21.6	65.7	2.8	7.1	1.9	297
<b>Residence</b>						
Urban	9.5	70.2	12.3	3.8	2.5	86
Rural	22.9	65.8	2.8	6.1	1.8	554
<b>School Type</b>						
Government	24.3	63.6	3.4	6.2	1.6	508
Private	8.6	76.9	6.9	4.0	3.3	132
<b>Economic Status Quintile*</b>						
Lowest	24.4	59.0	1.7	13.3	2.1	82
Second	26.9	63.9	1.8	5.7	1.6	159
Middle	30.6	68.0	4.1	5.8	1.8	223
Fourth	17.0	72.5	2.5	3.8	1.8	134
Highest	8.1	81.9	23.1	1.4	3.2	41

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## State Report Results – Comparisons Between States

### TOP REASONS FOR CHOOSING PRIMARY SCHOOL

*How do the reasons for selecting a primary school vary by economic status? By residence? Are the reasons for selecting a secondary school in this state similar to those in Nigeria overall?*



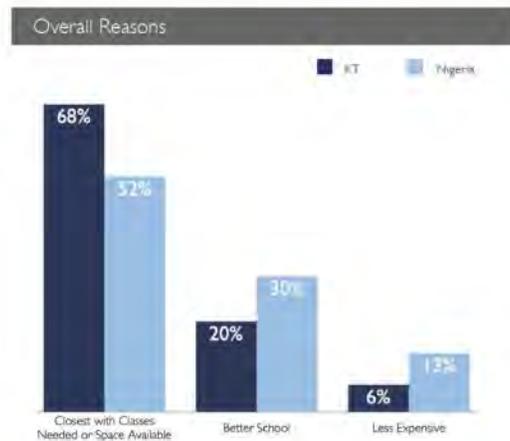
IN LAGOS

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## State Report Results – Comparisons Between States

### TOP REASONS FOR CHOOSING PRIMARY SCHOOL

*How do the reasons for selecting a primary school vary by economic status? By residence? Are the reasons for selecting a secondary school in this state similar to those in Nigeria overall?*



IN KATSINA

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## State Report Results – Comparisons Between States

## IN KANO

	Buildings and Facilities	Classroom Overcrowding	Pupil Safety	Practical Skills	Head Teacher Performance
	69%	73%	49%	96%	50%
	87%	86%	59%	91%	52%
GOVERNMENT SCHOOL	86%	86%	60%	*	54%
PRIVATE SCHOOL	58%	60%	39%	*	38%

61

## State Report Results – Comparisons Between States

## IN KADUNA

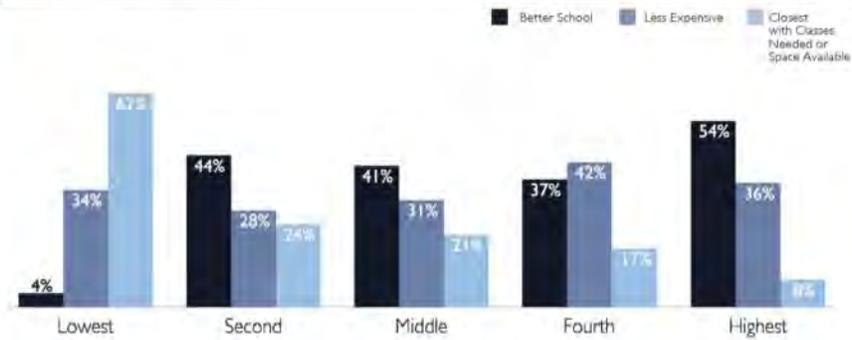
	Buildings and Facilities	Classroom Overcrowding	Pupil Safety	Practical Skills	Head Teacher Performance
	48%	49%	44%	95%	49%
	73%	66%	60%	96%	70%
GOVERNMENT SCHOOL	74%	68%	62%	*	71%
PRIVATE SCHOOL	32%	32%	27%	*	35%

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## State Report Results – Comparisons Between States

### IN EDO

By Economic Status Quintile

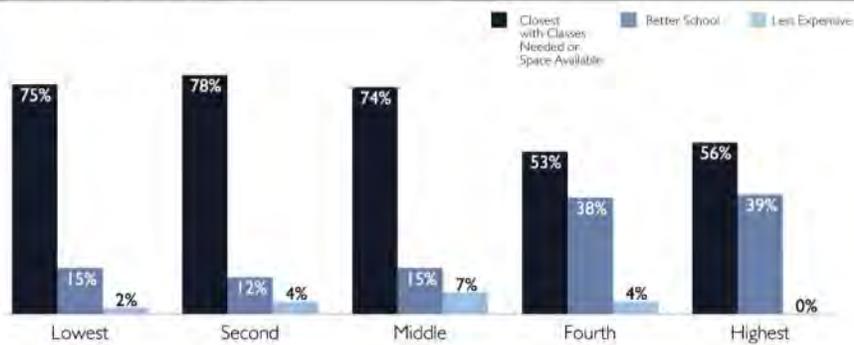


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## State Report Results – Comparisons Between States

### IN NASARAWA

By Economic Status Quintile



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## State Report Results – Comparisons Between States

### IN ANAMBRA

Walking Time to Nearest Primary School (in minutes)

	0-15	16-30	31-45	46-60	60+
All School Types	80%	12%	7%	0%	0%
Government School	67%	18%	12%	2%	1%
All School Types	64%	21%	10%	4%	0%
Government School	67%	17%	10%	6%	0%

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## State Report Results – Comparisons Between States

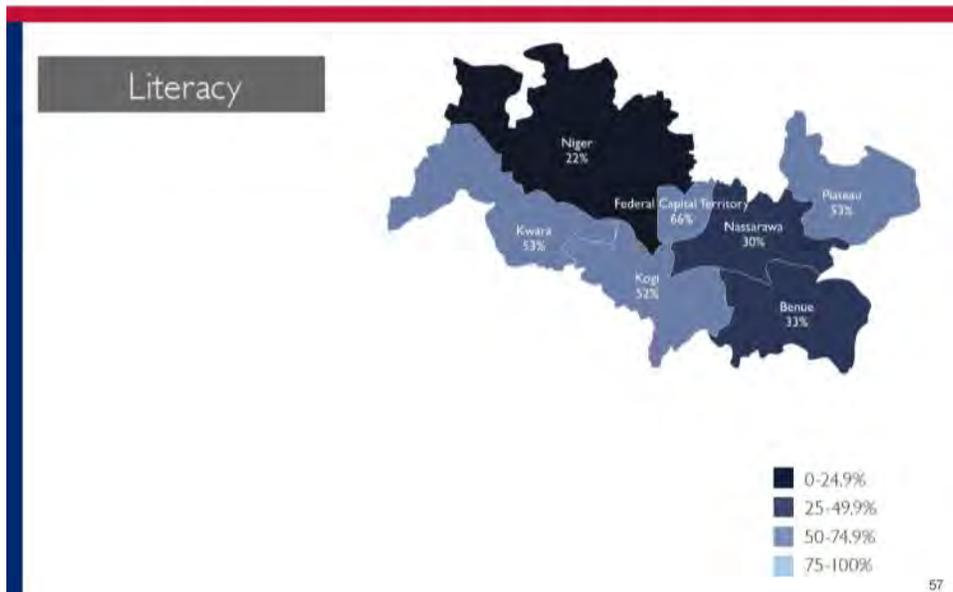
### IN KANO

Walking Time to Nearest Primary School (in minutes)

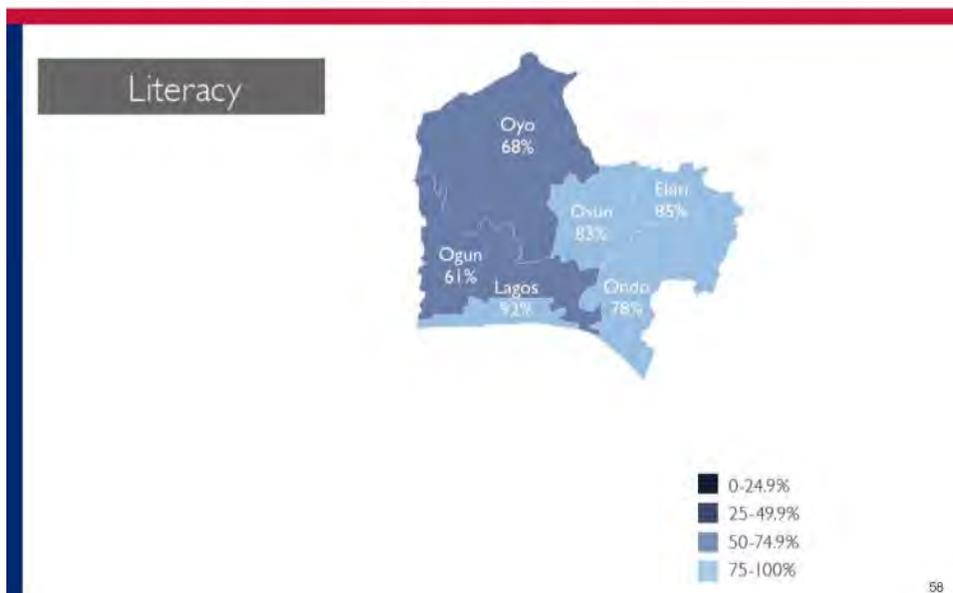
	0-15	16-30	31-45	46-60	60+
All School Types	96%	2%	1%	0%	0%
Government School	93%	6%	2%	0%	0%
All School Types	78%	18%	1%	2%	1%
Government School	77%	18%	1%	2%	1%

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### State Report Results – Comparisons Between Zones



### State Report Results – Comparisons Between Zones



## Working Group Discussion

- Study of the State Results and Thematic Reports
  - What results were expected?
  - What results are surprising?
- Main Conclusions
  - What are the key pieces of information that are actionable?
- Policy Implication
  - What changes or enhancements to current policy do the data indicate are needed?
- Lessons Learned to be used in NEDS 2015
  - Are there changes or enhancements to the survey needed to answer lingering policy issues?

## Plenary Wrap up

- Group Discussion
- Questions & Answers
- National Policy Implications
- Lessons Learned for NEDS 2015

Thank you!

Thank you for your attention,  
participation, and discussion!

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## **Annex D. Summary EMIS Report**

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### **Summary**

To build adequate technical capacity for the NEDS 2010+ project, two distinct objectives were pursued. The first objective was to plan and deliver a comprehensive technical training to the NEMIS team. This onsite technical training would be conducted for the NEMIS team in two five-day sessions, to provide a foundation for using the NEMIS database and the structured query language (SQL) that is used for extracting meaningful data. The secondary focus of these training sessions would be to introduce the training participants to EMIS Toolbox, a web-based platform for conducting data analysis on the national EMIS data.

The second objective was to provide the NEMIS team with a base EMIS Toolbox configuration modeled after the Federal Ministry of Education's NEMIS. Because the EMIS Toolbox is a general-purpose data analysis tool, each deployment of the application requires a custom configuration. This reference configuration would allow the NEMIS team to use the EMIS Toolbox to issue reports, create new indicators, and integrate external geographic information system (GIS) data while also learning the fundamentals of data management.

### **Training Provided**

The first training session was conducted December 9–13, 2013. The objective for the first training was to assess the skills of the training participants and plan a suitable training agenda accordingly. This first training session was designed to reinforce basic skills for managing the Microsoft SQL Server 2008 database, the underlying database for the NEMIS data import tool and for the EMIS Toolbox, and the web-based tool for EMIS data analysis.

Following this training session, the training participants rated the training at a score of 4.33 points out of a possible 5 points; their comfort level with using EMIS Toolbox for doing analysis at a score of 6.83 points out of a possible 10; and for setting up and configuring EMIS Toolbox, a score of 6.25 points out of a possible 10.

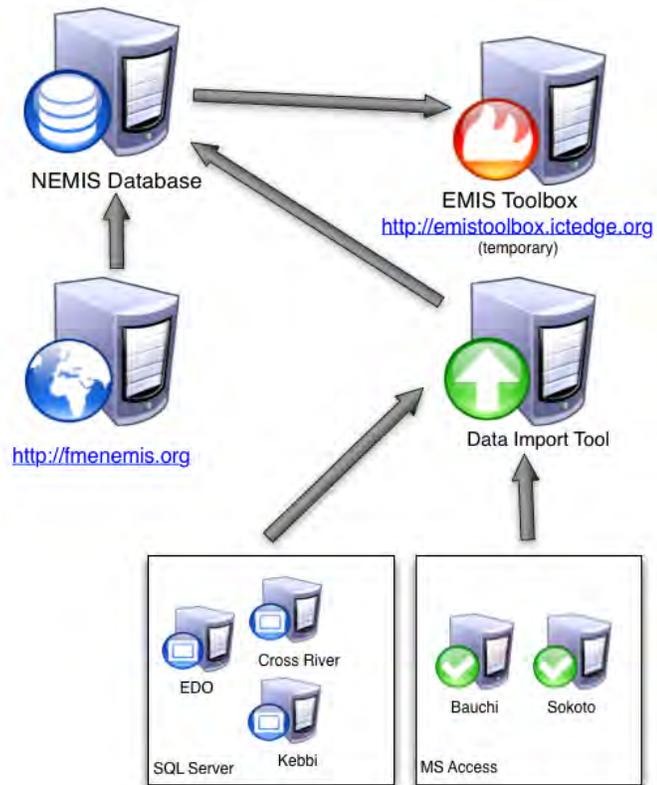
The second training session was conducted on March 24–March 28, 2014. This session built on the concepts introduced in the first training session, but went more in-depth to address complex SQL queries and additional techniques for more effective data analysis. The objective of this training session was to give the

training participants the tools they need to be self-sufficient with using EMIS Toolbox to produce meaningful reports.

Following the second training session, the training participants rated the overall quality of the training at a score of 4.01 points out of a possible 5 points; their comfort level with using EMIS Toolbox for doing analysis at a score of 6.83 points out of a possible 10; and for setting up and configuring EMIS Toolbox, a score of 6.25 points out of a possible 10.

## Work Plan Development

For the NEMIS team to be able to fully operationalize the collected knowledge, the following course of action is recommended. First, the EMIS Toolbox application should be moved to the server that is operating the NEMIS data input module web application and configured with a direct connection to the NEMIS database (see diagram at right). This design would ensure the best possible performance for both the EMIS Toolbox application and the NEMIS database. Second, to issue an analysis on historical EMIS data, the data migration from the state



EMIS databases to the national EMIS database (NEMIS) would need to be completed. As illustrated by the diagram above, this process can be facilitated by the EMIS Toolbox data import tool, which is a fully customizable MS Windows-based application. The EMIS Toolbox data import tool, along with its documentation, was provided to the NEMIS team in the second training session.

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**Annex E:      *EMIS Training Modules and  
Technical Documentation***

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# **Module 1**

## **EMIS Toolbox User Training Agenda**

### **Day 1:**

Introduction  
Database Overview  
Lab 1: Using SQL Server Management Studio  
Break  
Lab 2: SQL Basics

### **Day 2**

Introduction EMIS Toolbox  
Lab 3: Using the Analysis Tools  
Break  
Lab 4: Using the Indicators Tools

### **Day 3**

Reports  
Lab 5: Using the Reports  
Managing Data  
Lab 6: Using the Manage Data Function

### **Day 4**

Review: Creating a model  
Introduction to Mapping  
Lab 7: Mapping Errors  
Tea Break  
Lab 8: Connecting the NEMIS DB data source  
Lunch  
Lab 9: Creating the School Model and Mapping

### **Day 5**

Review  
EMIS Toolbox Mapping  
Lab 8: Creating a Simple Mapping  
Quiz

# EMIS Toolbox

User Training



## Objectives

- Basic understanding of the NEMIS database
- Navigate the EMIS Toolbox interface
- Generate reports by selecting indicator criteria
- Generate standard reports
- Configure EMIS Toolbox



## System Architecture





Lab 1

Browse the NEMIS database with SQL Server Management Studio.



Lab 2

SQL Basics



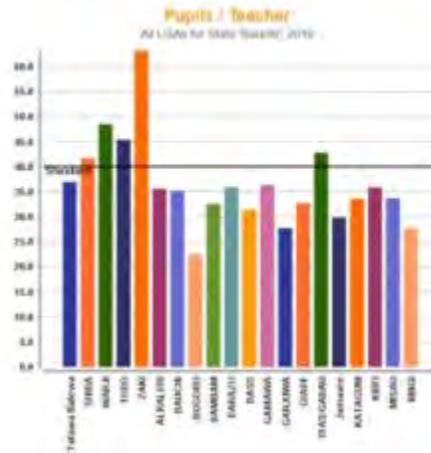
## EMIS Toolbox: Introduction

### Learning Objectives:

- The background of the EMIS Toolbox
- The importance of timely reliable data to education decision makers

EMIS  
toolbox

## EMIS Toolbox: Background



EMIS  
toolbox

## EMIS Toolbox Interface

### Learning Objectives:

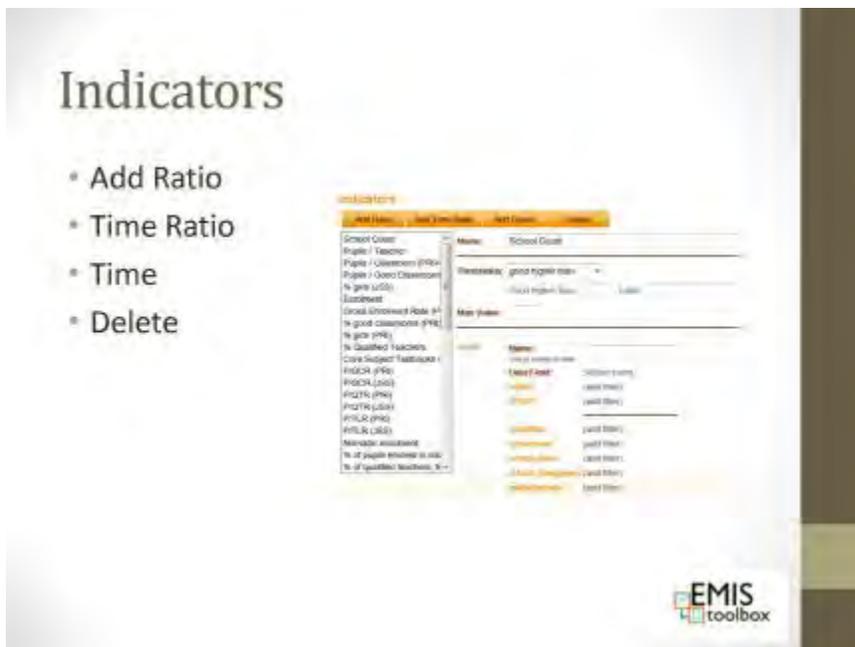
- Identify and understand the various parts of the application interface.



## Analysis

- Charts
- Priority Lists
- Reports





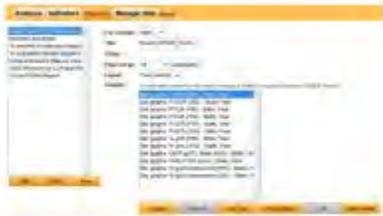
# Lab 4

Using the Indicator Tools



# Reports

- Viewing Reports
- Organizing Reports





## Lab 6

Using the Manage Data Functions



## EMIS Toolbox Configuration

- What is the configuration of the EMIS Toolbox?
- When do you configure the EMIS Toolbox?
- Who can configure the EMIS Toolbox?



## The Model

- The model describes your data. It includes information on:
  - Where do you collect data (the location).
  - When do you collect data (the dates).
  - How your data is structured (the classifications).
  - How are the locations related to each other (the hierarchy).
  - What data do you collect (the variables).



## Lab 7 Create a Simple Model



## The Mapping

- Where is the data stored (etc. in a database, in an Excel file).
- Which data table stores what information.
- Where do I find data values and where in the model do I need to put them.

EMIS  
toolbox

## Lab 8

Create a Simple Mapping

EMIS  
toolbox

Version

1

## INTRODUCTION

---

# EMIS TOOLBOX



## Introduction

---

This course has been developed to increase your knowledge of popular applications software and to provide you with the skills to accomplish your day-to-day work activities more efficiently. The design of the course is based on the assumption that you have completed the course prerequisites.

This manual has been compiled to support and to enhance the instructor's lecture during class as well as to serve as your personal reference when you return to your office.

## Manual Conventions

Throughout this manual reference is made to various components of the software. Command buttons, menus, and menu options appear in boldface type, for example, **OK** and **File**. Keystrokes appear in boldface italic type, for example, ***Ctrl + V*** and ***Enter***. When possible, the words *select* and *choose* have been used in this manual to allow you the option of using either the mouse or keyboard.

For your assistance, ample space along the left margin has been provided to allow room for notes relevant to the topic discussed. We also include notes of importance (☞), mouse-based shortcuts (☞), keyboard shortcuts (☞), cautionary notes (⊗), and work notes (☞).

## Course Objectives

*After this course, you will have the skills necessary to:*

- ✓ *Navigate the EMIS Toolbox interface.*
- ✓ *Generate reports by selecting indicator criteria.*
- ✓ *Generate standard reports.*

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**Lesson**

**1**

## **EMIS Toolbox Introduction**

*In this lesson, you will learn about:*

- ✓ *The background of the EMIS Toolbox*
- ✓ *The importance of timely reliable data to education decision makers*

## EMIS TOOLBOX BACKGROUND

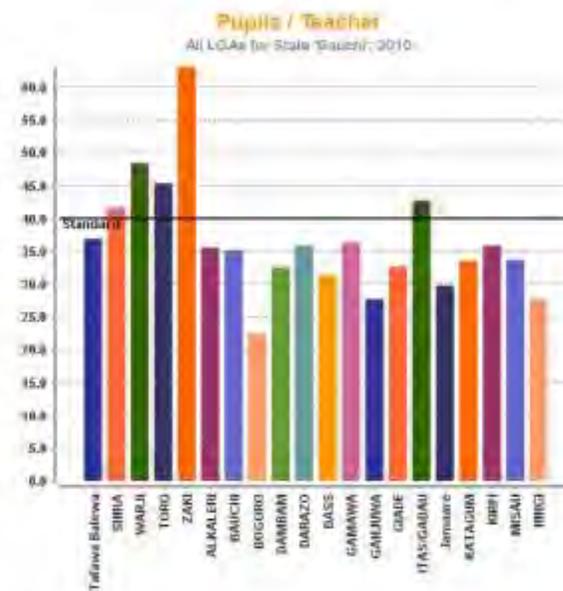
## Background

The EMIS Toolbox is a programme for education planners in government. It helps them to track the performance of the education sector, to decide how to allocate resources, and to share this information with other stakeholders (such as parents, or those in government).

The EMIS Toolbox works by giving those working in the education sector the tools to show and analyse their data in different ways, e.g. as charts, in maps or sorted as lists.

In this way, they can see patterns, e.g. regions that have poor pupil enrolment rates or individual schools that have high teacher absent rates. In this way, they can inform policy-making, and resource allocation. This helps the education sector become more efficient, e.g. as officials can spend money on the poorest schools, or send inspection teams to schools which are performing badly.

The EMIS Toolbox also allows its user to easily create report cards with charts and maps about a school or a district. This helps government to be more transparent, because they can easily share information about schools with communities or other government agencies.



A grey square graphic with the word "Lesson" in a small, bold, black font at the top and a large, white, bold number "2" in the center.

## EMIS Toolbox Interface

*In this lesson, you will learn the skills necessary to:*

- ✓ *Identify and understand the various parts of the application interface.*

## EMIS TOOLBOX INTERFACE

## EMIS Toolbox Environment

The EMIS Toolbox has four major sections; these are **Analysis**, **Indicators**, **Reports** and **Manage Data**. You can carry out different tasks using the different section. The functions of each are explained in this section. You can move between functions by clicking on the tabs. Education planners can explore the data using charts, maps or sorted lists to best inform their decisions.

### Analysis

The first section of the EMIS Toolbox uses the education data to make charts, e.g. to show the enrolment figures of an LGA over the years. To do this, you follow a step-by-step procedure.

The screen looks similar to the following:



### Using Charts

This function allows you to analyse the education data by making charts using education indicators, e.g. school numbers, enrolment rates, or the provision of water to schools. An advanced application also allows you to split the chart into further groups, e.g. to split the enrolment figures into boys and girls or by academic year.

### Using Priority List

This function is the third planning tool. It allows you to sort the schools on the database numerically, e.g. you can list the schools in order from the highest enrolment rate of girls to the lowest. In the list you can also show more than one indicator, e.g. sorting the schools first by their pupil to classroom ratio, but also showing the number of pupils and the number of classrooms.

**EMIS TOOLBOX INTERFACE**

### **Using Reports**

This function allows you to make a single page report showing up to four charts or maps. This report can be printed to share with other stakeholders.

## EMIS TOOLBOX INTERFACE

## Indicators

An indicator is "A quantitative or qualitative factor or variable that provides a simple and reliable means to - measure achievement - to reflect changes connected to an intervention or - to help assess the performance of a development actor" The interface indicator shows number of education milestones of which if selected from the EMIS toolbox will generate report which serve as an instrument which gives you measurable information on specified period of time.

The indicators presented on the EMIS toolbox are measurable, relates to issues and priorities, they are in numbers, rates, or percentage, easy to get the data and outcome –oriented, as shown below

The screen looks similar to the following:

**Indicators**

[Add Ratio](#)
[Add Time Ratio](#)
[Add Count](#)
[Delete](#)

School Count	<b>Name:</b> School Count
Pupils / Teacher	
Pupils / Classroom (PRI+)	
Pupils / Good Classroom:	<b>Thresholds:</b> good higher than
% girls (JSS)	Good higher than Late
Enrolment	
Gross Enrolment Rate (P)	<b>Max Value:</b>
% good classrooms (PRI)	
% girls (PRI)	
% Qualified Teachers	
Core Subject Textbooks /	
P/GCR (PRI)	<b>Name</b>
P/GCR (JSS)	Only to display in table
P/QTR (PRI)	<b>Data Field</b> School count
P/QTR (JSS)	USEC (add filter)
P/TLR (PRI)	WAGE (add filter)
P/TLR (JSS)	
Nomadic enrolment	any other (add filter)
% of pupils enrolled in 1st	of classroom (add filter)
% of qualified teachers, fe	school fee (add filter)
	school computer (add filter)
	classroom (add filter)

### Add Ratio

The Add Ratio button allows you to add a new ratio indicator on the list of

## EMIS TOOLBOX INTERFACE

indicators in the EMIS toolbox, e.g. Pupil/Teacher ratio, Pupil/Classroom ratio etc.

### Time Ratio

The Time Ratio button allows the operator to create or add new time ratio indicator, e.g. current year/next year, current year/previous year etc.

### Count

The count button allows you to add new number indicator, e.g. school count, enrolment, teacher count etc.

### Delete

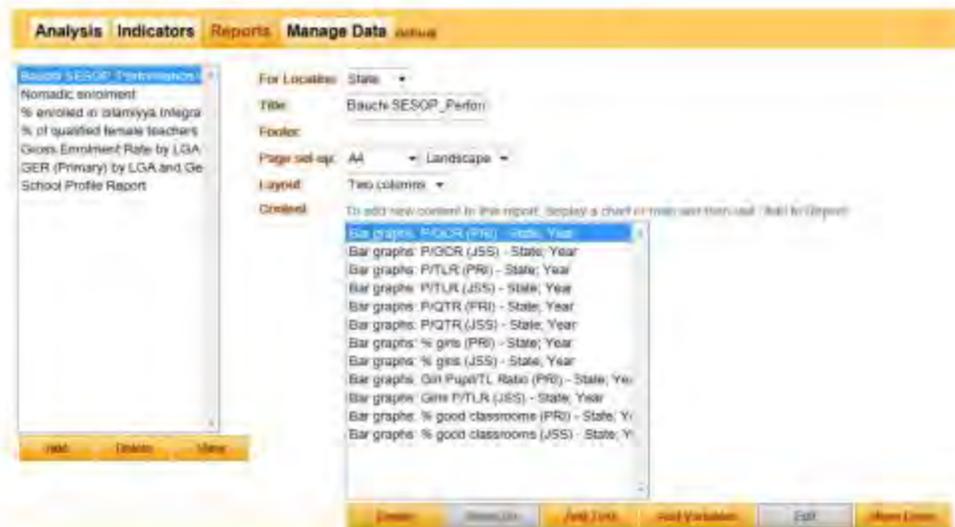
The delete function allows to erase any item which was recommended to be discarded ( not required).

## EMIS TOOLBOX INTERFACE

## Reports

The report as reflected on the EMIS toolbox is expected to generate self-explanatory statement of facts relating to a specific subject and serves the purpose of providing information for decision making and follow up actions. It is a systematic presentation of ascertained facts about a specific event / subject. Report is a summary of findings and recommendations about a particular matter / problem. E.g. SESOP Performance, Nomadic enrolment, Percentage of qualified female teachers, School profile report etc. Analysis based on the indicators presented on the EMIS toolbox will generate the information as indicated on the diagram below.

The screen looks similar to the following:



EMIS TOOLBOX INTERFACE

## Manage Data

The manage data function enable the user to load and save any changes made on the EMIS toolbox as shown on the below diagram.

The screen looks similar to the following:



### Load

The load button allows loading of data in the EMIS toolbox

### Save

The save button allows saving of loads data in the EMIS toolbox

EMIS TOOLBOX INTERFACE

**Lesson**

**3**

## **Generating Reports**

*In this lesson, you will learn the skills necessary to:*

- ✓ *Select indicators and criteria to produce reports*
- ✓ *Produce standard reports*

## GENERATING REPORTS

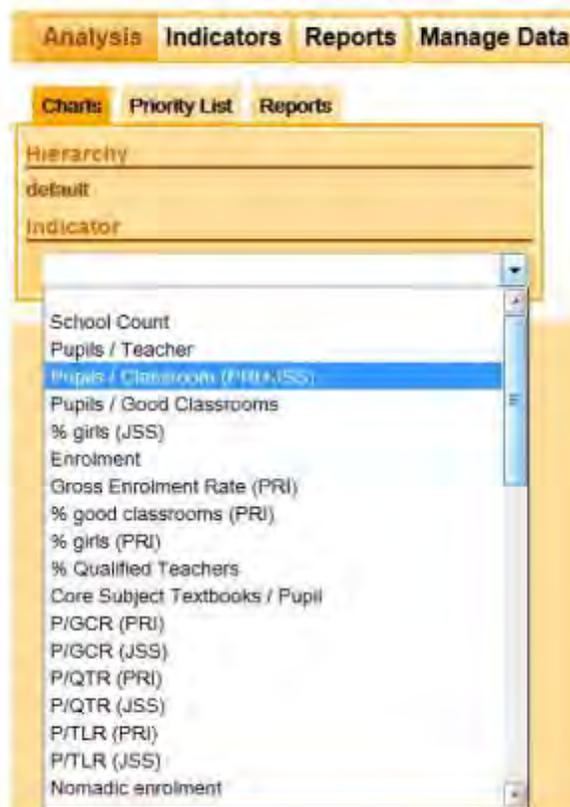
## Indicator Reports

An easy method for accessing ASC data is by generating reports based on the selection of an indicator and various criteria. This section shows the steps necessary to complete this task.

### How to Create Reports by Indicator and Criteria

Step 1. While in the **Analysis** section of the application, choose the **Indicator** dropdown button.

The screen looks similar to the following:



STEPS CONTINUE ON NEXT PAGE



## GENERATING REPORTS

Step 2. Choose the report **Indicator**. The selected **Indicator** will be displayed.

Indicator type	Marker	Examples
Percentage	%	Percentage of girl pupils Percentage of pupils repeating a class
Ratio	/	Pupils per toilet Books per pupil
Whole numbers	(none)	Number of schools Number of classrooms

Step 3. Choose the **X-Axis** dropdown button.

The screen looks similar to the following:



STEPS CONTINUE ON NEXT PAGE

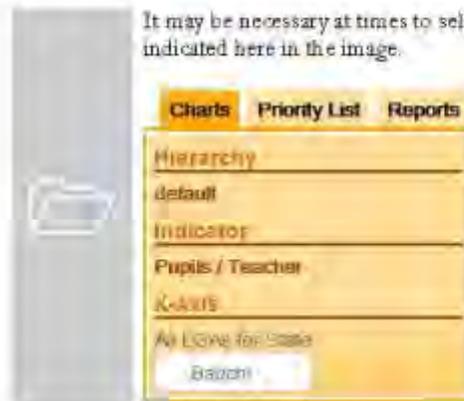


## GENERATING REPORTS

Step 4 Choose the **X-Axis** desired. The selected **X-Axis** will be displayed.

Analysis type	Explanation	Example
Horizontal analysis	Compare the same units of administration	Compare all schools of a LGA. Compare the LGAs of a State.
Vertical analysis	Compare different units of administration	Compare one school with the average values of the LGA and the State.
Date analysis	Compare different years	Compare the data for a school over the years
Grouping analysis	Compare different data groupings	Compare the numbers of boys and girls.
Location analysis	Compare type of schools	Compare private and government schools in an LGA. Compare schools that have water with those that do not.

It may be necessary at times to select the state for the X-Axis as indicated here in the image.



Step 5 It is possible to split data in to further groups using the **Split By** option. Choose the **Split By** dropdown button.

STEPS CONTINUE ON NEXT PAGE



## GENERATING REPORTS



**Split By** - This is an advanced function of the EMIS Toolbox. You can decide to split the chart into further groups, e.g. to split the enrolment figures into boys and girls.

The screen looks similar to the following:



Split type	Explanation	Example
No split dimension	The bars of the chart are not split.	(none)
Date analysis	A different bar is shown for each year.	A graph that shows the enrolment figures for Sokoto State between the years 2000-2010, split by year.
Horizontal analysis	A different bar is shown for each unit of administration of the same level.	A graph that shows the pupil/teacher ratios in government, private and religious schools, split by all LGAs in Sokoto State.

## GENERATING REPORTS

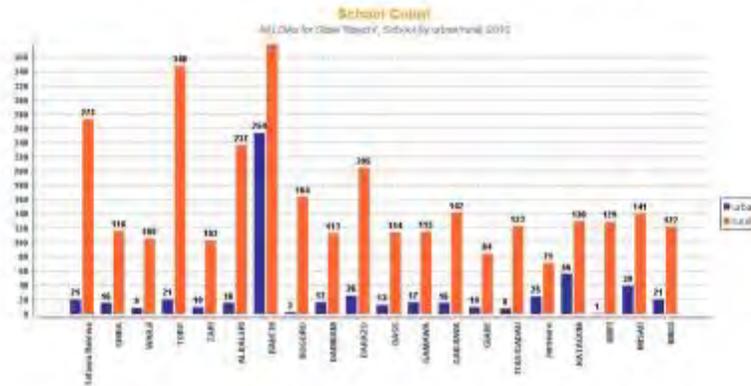
Vertical analysis	A different bar is shown for each unit of administration on different levels.	A graph that shows the pupil/teacher ratios in government, private and religious schools split by one LGA and the Sokoto State averages.
Groupings analysis	A different bar is shown for each data grouping.	A graph that pupil numbers for all LGAs within Sokoto State, split by boys and girls.
Location analysis	A different bar is shown for each grouping of a specific indicator.	A graph that shows the pupil/teacher ratios in Sokoto State, split by government, private and religious schools.

Step 6 Choose the **Date** dropdown button and select the desired period to use for the report.

The screen looks similar to the following:

GENERATING REPORTS

The final displayed chart will look similar to the following:



The criteria selected for the displayed chart will be presented similar to the following.

**Charts** | **Priority List** | **Reports**

---

Hierarchy

default

---

Indicator

School Count

---

X-Axis

All LGAs for State "Bauchi"

---

Split by

School by urban/rural

[switch]

---

Date

2010

---

Chart Style: Bar graphs

Sort: (no sort)

[Add to Report]

## GENERATING REPORTS

## Priority List

Lists of selected data by priority, e.g. from the highest to lowest enrolment rates. You can also show more than one indicator, e.g. sorting the schools first by their pupil to classroom ratio, but also showing the number of pupils and the number of classrooms.

### How to Create Priority List

Step 1. Select the **Priority List** tab

The screen looks similar to the following:

The screenshot shows a web interface with three tabs: 'Charts', 'Priority List', and 'Reports'. The 'Priority List' tab is active. Below the tabs, there are two dropdown menus. The first is labeled 'Hierarchy' and has 'default' selected. The second is labeled 'Location to List' and is currently empty with a downward arrow.

Step 2. Select the **Location to List** dropdown button and choose the desired location

The screen looks similar to the following:

This screenshot is similar to the previous one, but the 'Location to List' dropdown menu is open, showing a list of options: 'State', 'USA', and 'School'. The 'USA' option is highlighted in blue, indicating it is the selected location.

## GENERATING REPORTS

Step 3. Select the **Variables to Display** dropdown button and choose the desired variable to display.

The screen looks similar to the following:

The screenshot shows a web interface with three tabs: 'Charts', 'Priority List', and 'Reports'. The 'Reports' tab is active. Below the tabs, there are several sections: 'Hierarchy' (with 'default' selected), 'Location to List', 'LGA', and 'Variables to display'. The 'Variables to display' section is expanded, showing a list of variables: 'School Count', 'Pupils / Teacher Ratio', 'Pupils / Classroom Ratio', 'Pupils / Good Classrooms Ratio', '% girls (JSS)', 'Enrolment', 'Gross Enrolment Rate (PRI)', and '% good classrooms (PRI)'. The 'Enrolment' option is highlighted in blue.

Step 4. Select the **Location** and choose the desired location.

The screen looks similar to the following:

The screenshot shows the same web interface as in Step 3. The 'Variables to display' section is now collapsed, and the 'Location' section is expanded. It shows a dropdown menu with 'Bauchi' selected. The 'Hierarchy' section remains 'default'.



It is possible to expand the options to select by clicking on the + next to State name and as well the LGA name.

**GENERATING REPORTS**

Step 5. Select the **Date** and choose the desired year, and then choose the **OK** button.

The screen looks similar to the following:

The screenshot shows a software interface with three tabs: 'Charts', 'Priority List', and 'Reports'. The 'Reports' tab is active. Below the tabs, there are several sections: 'Hierarchy' with a 'default' option, 'Location to List' with 'LGA', 'Variables to display' with 'School Count', 'Location', and 'Basic', and 'Date'. The 'Date' section has a dropdown menu currently showing '2010' and an 'OK' button. A list of years is visible below the dropdown: 2004, 2005, 2006, 2007, 2009, and 2010. The year 2010 is highlighted in blue.

## GENERATING REPORTS

The resulting list will look similar to the following:

ID	Name	School Count
876	Jamsare	109
873	GADE	104
884	ZAKI	114
883	WARJI	117
870	DASSI	127
880	SHIRA	133
871	GAMAWA	133
888	DAMBAM	134
877	KIRFI	134
874	ITAS/GADAI	137
879	NINGI	145
872	GANJUWA	161
867	BOGORO	172
878	MISALI	188
876	KATAGUM	193
869	DARAZO	240
865	ALKALERI	267
881	Tatawa Balewa	302
882	TORO	382
866	BAUCHI	670

< Prev      Next >

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## GENERATING REPORTS

## Glossary of Terms

Analysis	Finding patterns in large sets of information or data.
Average	A number that represents a group.  The average number is calculated by adding up all the values of a set of data and dividing by the number of values.
Bar chart	A bar chart is a way of showing information by the length of bars.
Chart	'Chart' is a general word for various kinds of pictures and diagrams which are used to represent data.  In the EMIS Toolbox, 'Chart' is a function that allows you to analyse education data by making charts, e.g. of school numbers or enrolment rates.
Data	Facts and other information that are collected to study later. It is normally shown in graphs, charts and tables.
Date analysis	Comparison of different years, e.g. compare the data for a school over the years.
Grouping analysis	Comparison of different data groupings, e.g. compare the percentages of boys and girls.
Indicator	The kind of information you want to analyse or show in a chart, e.g. class sizes. The EMIS Toolbox shows indicators as percentages, ratios, or whole numbers.
Horizontal analysis	Comparison of the same units of administration, e.g. compare all schools of a LGA, compare the LGAs of a State.
Location	The area analysed in the EMIS Toolbox, either in the 'Maps', 'Chart', or 'Priority List' functions.

Location analysis	Comparison of schools using a specific indicator, e.g. compare private and government schools in an LGA.
Maps	A function of the EMIS toolbox that allows you to analyse data using maps.
Percentage	A quantity like 25% (25 percent) is called a percentage. It is a way of showing a number as parts out of 100, e.g. 25% means 25 out of 100.
Pie chart	A chart that shows information using different sized sectors of a circle. They allow you to easily compare information, particularly in relation to the whole.
Plot location	The level of detail of a map, e.g. whether a map shows each individual school or the data for a whole LGA.
Priority lists	A function of the EMIS toolbox that allows you to sort the schools on the database numerically, e.g. you can list the schools in order from the highest enrolment rate of girls to the lowest.
Ratio	A comparison made between two or more quantities. A ratio is often written as a fraction, e.g. 38/60 means 38 out of 60.
Reports	A function of the EMIS Toolbox that allows you to make a single page report showing up to four charts or maps.
Split	Splitting up the bars of a chart to show more information, e.g. to see how the enrolment figures of an LGA progress over the years.
Variable	A variable is something that changes. It can take on different values.
Vertical analysis	Comparison of different units of administration, e.g. compare one school with the average values of the LGA and the State.

**GENERATING REPORTS**

X-Axis	<p>The line that makes up the bottom edge of a chart. The X-Axis shows the type of analysis the chart makes, the years for which pupil enrolment is compared.</p> <p>In the EMIS Toolbox, there are four types of analysis: Horizontal analysis, Vertical analysis, Data analysis, Grouping analysis, and Location analysis.</p>
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## EMIS Overview

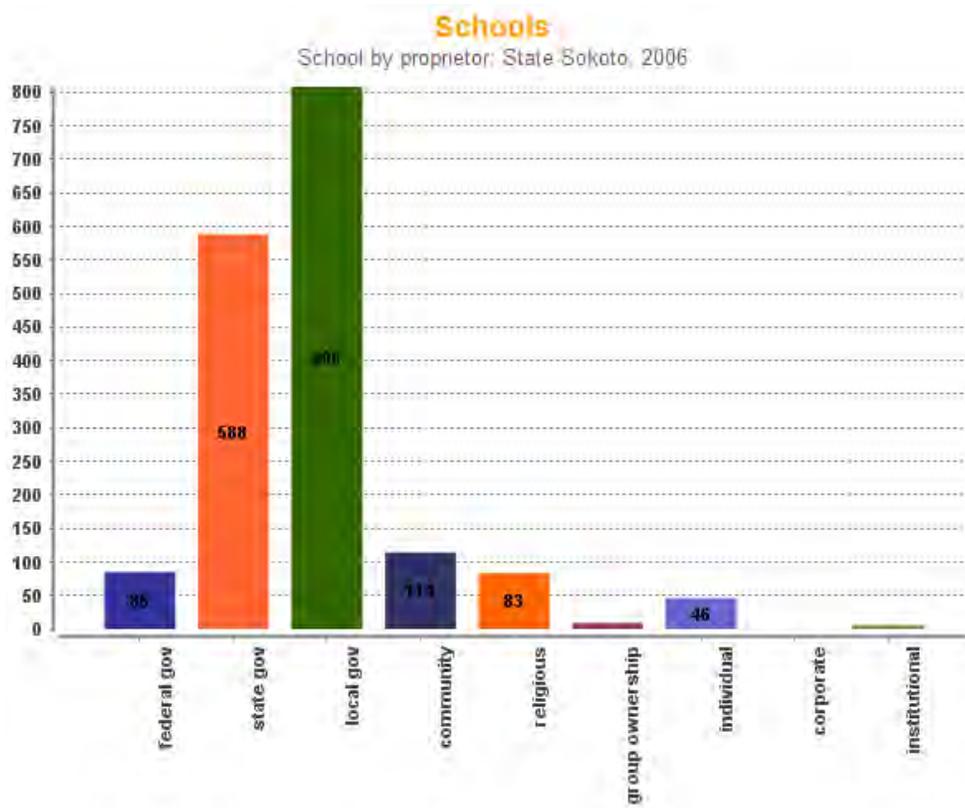
### Introduction

The EMIS Toolbox is a program for education planners in government. It helps them to track the performance of the education sector, to decide how to allocate resources, and to share this information with other stakeholders (such as parents, or those in government).

The EMIS Toolbox works by giving those working in the education sector the tools to show and analyze their data in different ways, e.g. as charts, in maps or sorted as lists.

In this way, they can see patterns, e.g. regions that have poor pupil enrolment rates or individual schools that have high teacher absent rates. In this way, they can inform policy-making, and resource allocation. This helps the education sector become more efficient, e.g. as officials can spend money on the poorest schools, or send inspection teams to schools which are performing badly.

The EMIS Toolbox also allows its user to easily create report cards with charts and maps about a school or a district. This helps government to be more transparent, because they can easily share information about schools with communities or other government agencies.



## How the EMIS Toolbox is organized

The EMIS Toolbox has four functions, each of which allows you to show your education data in a different way. The sections are as follows:

<b>Chart</b>	<p>This function allows you to analyze the education data by making charts using education indicators, e.g. school numbers, enrolment rates, or the provision of water to schools.</p> <p>An advanced application also allows you to split the chart into further groups, e.g. to split the enrolment figures into boys and girls or by academic year.</p>
<b>Maps</b>	<p>In this function you can analyze the same education data using maps.</p> <p>This allows you to recognize regional patterns, e.g. if there are any regions that have high dropout rates or where overcrowding is a problem.</p>
<b>Priority List</b>	<p>This function is the third planning tool. It allows you to sort the schools on the database numerically, e.g. you can list the schools in order from the highest enrolment rate of girls to the lowest.</p> <p>In the list you can also show more than one indicator, e.g., sorting the schools, first by their pupil to classroom ratio, but also showing the number of pupils and the number of classrooms.</p>
<b>Reports</b>	<p>This function allows you to make a single page report showing up to four charts or maps. This report can be printed to share with other stakeholders.</p>

You can move between functions by clicking on the tabs. Education planners can explore the data using charts, maps or sorted lists to best inform their decisions. The following sections will explain each function in more detail.

## 1. Analyzing the data using the Chart function:

The first section of the EMIS Toolbox uses the education data to make charts, e.g. to show the enrolment figures of an LGA over the years. To do this, you follow a step-by-step procedure.

**Indicator**    *The information the chart will show, e.g. student numbers, or class sizes.*



**X-Axis**    *The type of evaluation the chart will show, e.g. evaluate an LGA over a number of years, or compare different schools with each other.*



**Date**    *The year of the data the chart will show.*



**Location**    *The location the chart will show, e.g. Toro LGA, or all LGAs in Bauchi State.*



**Split**    *This is an advanced function of the EMIS Toolbox. You can decide to split the chart into further groups, e.g. to split the enrolment figures into boys and girls.*

Depending on the type of evaluation you choose in step 2, numbers 3 & 4 & 5 are not always relevant and so the program will not always ask you these.

### Step 1: Indicator

The indicator is the information you want to show in a chart. There are three different types of indicator:

Indicator type	Marker	Examples
Percentage	%	Percentage of girl pupils Percentage of pupils repeating a class
Ratio	/	Pupils per toilet Books per pupil
Whole numbers	(none)	Number of schools Number of classrooms

### Step 2: X-Axis

The X-Axis is for the type of analysis that the chart will show. There are five types of analysis:

Analysis type	Explanation	Example
Horizontal analysis	Compare the same units of administration	Compare all schools of a LGA. Compare the LGAs of a State.
Vertical analysis	Compare different units of administration	Compare one school with the average values of the LGA and the State.
Date analysis	Compare different years.	Compare the data for a school over the years
Grouping analysis	Compare different data groupings	Compare the numbers of boys and girls.
Location analysis	Compare type of schools.	Compare private and government schools in an LGA. Compare schools that have water with those that do not.

### Step 3: Location

Choose the location that the chart will show. You can work at the level of a whole State, one LGA, or just one school. To navigate the locations, use the [+] or [-] buttons.

You will see the name of the State. To include the whole State in the chart, click its name.

To make a chart for an LGA, click the [+] button, next to the State name. This will show the names of all LGAs. Click the name of your LGA.

To make a chart for one school, click the [+] button next to the LGA name.

This will show the names of the schools. Click the name of your school.

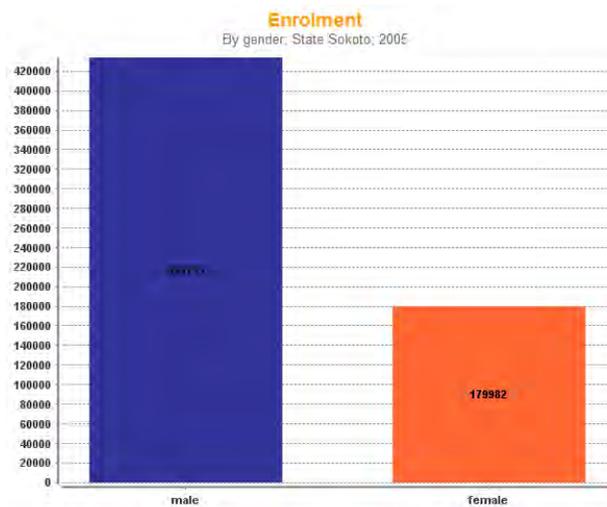
Use the [-] buttons to hide the names of the LGAs or schools.

### Step 4: Date

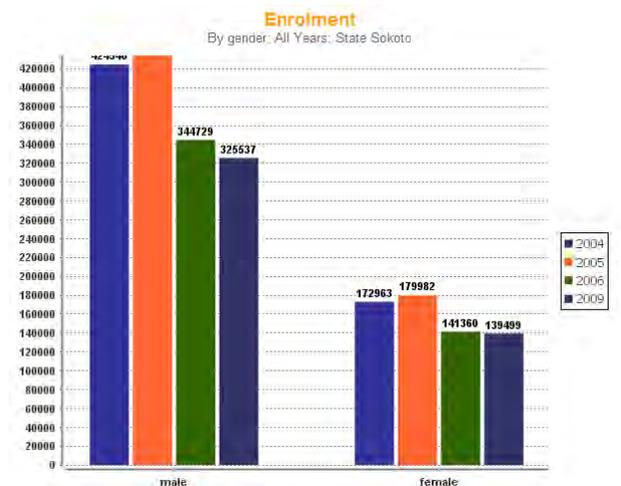
Choose the year you want to see. You can change the year after making the chart. If you are making a date analysis, the date box will not show.

### Step 5: Split

Sometimes, it is useful to show more detail in a chart, e.g. to see how the enrolment figures of Sokoto State progress over the years.



Enrolment by gender.



Enrolment by gender, with additional split by year

To show this kind of detail, you can split up the indicator of your chart further.

<b>Split type</b>	<b>Explanation</b>	<b>Example</b>
No split dimension	The bars of the chart are not split.	(none)
Date analysis	A different bar is shown for each year.	A graph that shows the enrolment figures for Sokoto State between the years 2000-2010, split by year.
Horizontal analysis	A different bar is shown for each unit of administration of the same level.	A graph that shows the pupil/teacher ratios in government, private and religious schools, split by all LGAs in Sokoto State.
Vertical analysis	A different bar is shown for each unit of administration on different levels.	A graph that shows the pupil/teacher ratios in government, private and religious schools split by one LGA and the Sokoto State averages.
Groupings analysis	A different bar is shown for each data grouping.	A graph that pupil numbers for all LGAs within Sokoto State, split by boys and girls.
Location analysis	A different bar is shown for each grouping of a specific indicator.	A graph that shows the pupil/teacher ratios in Sokoto State, split by government, private and religious schools.

## 2. Analyzing the data using the Map function

The second function of the program shows the education data as maps. The maps have different color shadings, depending on the value of the indicator.

As in the chart section, you follow a series of steps to determine the detail and data that the map shows.

**Plot Location**      *The level of detail of the map – decide if the map will show each individual school or the data for the whole L*



**Indicator**      *The information that the map will show, e.g. student numbers, or class sizes.*



**Location**      *The area that the map shows, e.g. a map of a whole State or just one LGA.*



**Date**      *The year of the data*

**NOTE: Currently there is no mapping available for the EMIS Toolbox in Nigeria.**

### 3. Analyzing the data using a Priority List

The third section sorts the data in order of priority, e.g. from the highest to lowest enrolment rates. You can also show more than one indicator, e.g. sorting the schools, first by their pupil to classroom ratio, but also showing the number of pupils and the number of classrooms.

To make a list, you make a series of choices:

**Location to List**      *The level at which you want to make a list. Choose if you want to list each school, or average values for each LGA or the state.*



**Variables to Display**      *The information that is listed, e.g. pupil/teacher ratios.*

*Advance functions also allow you to show more information, e.g. the numbers of pupils and teachers, and also the number of teachers still needed to reach a target pupil/teacher ratio.*



**Location**      *If you want to make a list of all schools, choose the area you are working with – either just one school, LGA or the whole State.*



**Date**      *The year of the data.*

#### Step 1: The Location to List

Decide the detail of the list, e.g. you can make a long list showing each school, or a shorter list of average values for a State or a LGA.

#### Step 2: Variables to Display

Use the list to choose the indicators your list will show.

After you have clicked an indicator, it will show with a red button on the left.

You can delete an indicator by clicking the red button.

You can show more than one indicator on your list. In this case, you can order of indicators by which to sort the list. The EMIS Toolbox asks you to choose an indicator to ‘sort by’ and ‘then by’ other indicators.

As an advanced function, you will also see that the indicator is shown with the word “*(indicator)*”. Click this word to select the values that are used in the calculations, e.g. in addition to showing the percentage of girls enrolled in schools, you can also see the number of girls and the total number of pupils of the school.

After you choose the variables you want to list, click the button ‘OK’.

### **Step 3: Location**

Choose the location that the list will show. You can work at the level of a whole State, one LGA, or just one school. To navigate the locations, use the [+] or [-] buttons.

You will see the name of the State. To include the whole State on the list, click its name.

To make a list for an LGA, click the [+] button, next to the State name. This will show the names of all LGAs. Click the name of your LGA.

To make a list for one school, click the [+] button next to the LGA name. This will show the names of the schools. Click the name of your school.

Use the [-] buttons to hide the names of the LGAs or schools.

### **Step 4: Date**

Choose the date of the data for your list. After you choose the date, click the button ‘OK’.

## **Glossary of terms as they are used in the context of the EMIS Toolbox**

### ***Analysis***

Finding patterns in large sets of information or data.

### ***Average***

A number that represents a group.

The average number is calculated by adding up all the values of a set of data and dividing by the number of values

### ***Bar chart***

A bar chart is a way of showing information by the length of bars.

### ***Chart***

'Chart' is a general word for various kinds of pictures and diagrams which are used to represent data.

In the EMIS Toolbox, 'Chart' is a function that allows you to analyze education data by making charts, e.g. of school numbers or enrolment rates.

### ***Data***

Facts and other information that are collected to study later. It is normally shown in graphs, charts and tables.

### ***Date analysis***

Comparison of different years, e.g. compare the data for a school over the years.

### ***Grouping analysis***

Comparison of different data groupings, e.g. compare the percentages of boys and girls.

### ***Indicator***

The kind of information you want to analyze or show in a chart, e.g. class sizes. The EMIS Toolbox shows indicators as percentages, ratios, or whole numbers.

### ***Horizontal analysis***

Comparison of the same units of administration, e.g. compare all schools of a LGA, compare the LGAs of a State.

### ***Location***

The area analyzed in the EMIS Toolbox, either in the 'Maps', 'Chart', or 'Priority List' functions.

***Location analysis***

Comparison of schools using a specific indicator, e.g. compare private and government schools in an LGA.

***Maps***

A function of the EMIS toolbox that allows you to analyze data using maps.

***Percentage***

A quantity like 25% (25 percent) is called a percentage. It is a way of showing a number as parts out of 100, e.g. 25% means 25 out of 100.

***Pie chart***

A chart that shows information using different sized sectors of a circle. They allow you to easily compare information, particularly in relation to the whole.

***Plot location***

The level of detail of a map, e.g. whether a map shows each individual school or the data for a whole LGA.

***Priority lists***

A function of the EMIS toolbox that allows you to sort the schools on the database numerically, e.g. you can list the schools in order from the highest enrolment rate of girls to the lowest.

***Ratio***

A comparison made between two or more quantities. A ratio is often written as a fraction, e.g. 38/60 means 38 out of 60.

***Reports***

A function of the EMIS Toolbox that allows you to make a single page report showing up to four charts or maps.

***Split***

Splitting up the bars of a chart to show more information, e.g. to see how the enrolment figures of an LGA progress over the years.

***Variable***

A variable is something that changes. It can take on different values.

***Vertical analysis***

Comparison of different units of administration, e.g. compare one school with the average values of the LGA and the State.

### **X-Axis**

The line that makes up the bottom edge of a chart. The X-Axis shows the type of analysis the chart makes, the years for which pupil enrolment is compared.

In the EMIS Toolbox, there are four types of analysis: Horizontal analysis, Vertical analysis, Data analysis, Grouping analysis, and Location analysis.



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EDUCATION INITIATIVE**

## Introduction to MS SQL

Understanding the fundamentals of database queries, data mining and preparations for integrating EMIS data with the EMIS toolbox

## Introductions and Overview

- Introduction of speaker – David Plotner, RTI International
- What is the goal of this training?
- Roundtable introduction of training participants



## 1. Introduction, Setup and Configuration

- Distribution of course dvd, and handouts
- Check user privs on machines
- Installation/review of SQL Server 2008 Exp
  - Support installations:
    - Windows Powershell 1.0
    - Windows Installer 4.5 RTM
    - .NET framework 3.5 SP1
- Installation of EMIS Toolbox
- Loading of training database



## 2. Introduction to Databases

- What is a database?
- Noun: A structured set of data held in a computer, esp. one that is accessible in various ways.
- **The Flat Model Database**
- **The Hierarchical Model Database**
- **The Relational Model**



## 2. Introduction to Databases

- EMIS databases and integration into the EMIS toolbox (overview)



## 2. Introduction to Databases

- What is SQL?

**SQL**: often referred to as **Structured Query Language**) designed for managing data in [relational database management systems](#) (RDBMS).

ANSI SQL

MS SQL



## 2. Introduction to Databases

- Tables and views
  - What is a database table ?
  - Columns and Rows
    - Column Names
    - Data Types
    - IsNull
    - Primary Keys
    - Foreign Constraints



## 2. Introduction to Databases

- Data Types (partial list – exact arithmetic types)
  - **int** variables store 4-byte whole numbers ranging from -2,147,483,648 to 2,147,483,647.
  - **bigint** variables store 8-byte whole numbers ranging from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807.
  - **smallint** variables store 2-byte whole numbers ranging from -32,768 to 32,767.
  - **tinyint** variables store 1-byte whole numbers ranging from 0 to 255.
  - **decimal** and **numeric** variables are functionally equivalent and store numbers of fixed precision and scale.



## 2. Introduction to Databases

- Data Types (partial list – approx arithmetic types)
  - **float** variables store 4-byte or 8-byte floating point numbers. They are specified as float(p), where p is 24 for a 4-byte number and 53 for an 8-byte number.
  - **real** variables store 4-byte floating point numbers and are functionally equivalent to float(24) variables.



## 2. Introduction to Databases

- Data Types (partial list – non-arithmetic)
  - **datetime** variables store 8-byte time and date values ranging from January 1, 1753 to December 31, 9999 with an accuracy of 3.33 milliseconds.
  - **datetime2** variables use between 6-8 bytes to store dates and times between January 1, 0001 and December 31, 9999 with an accuracy of 100 nanoseconds.
  - **smalldatetime** variables store 4-byte time and date values ranging from January 1, 1900 to June 6, 2079 with an accuracy of 1 minute.
  - **date** variables use 3 bytes to store a date only (with no time information) in the range January 1, 0001 through December 31, 9999. **time** variables use between 3-5 bytes to store a time only (with no date information) to an accuracy of 100 nanoseconds.



## 2. Introduction to Databases

- Data Types (partial list character strings)
  - **char(n)** variables store fixed-length character strings consisting of exactly n characters (and, therefore, n bytes). They are limited to 8,000 characters in size.
  - **varchar(n)** variables store non-fixed length character strings consisting of approximately n characters. They consume l+2 bytes of space, where l is the actual length of the string. They are limited to 8,000 characters in size.
  - **text** and **ntext** variables store up to 2GB of text data (ANSI and Unicode, respectively), but can not be used in many text operations. Therefore, they are usually only used to support legacy applications and have been replaced by the **varchar(max)** and **nvarchar(max)** data types.



## 2. Introduction to Databases

- Data Types (other types)

- **bit** variables store a single bit with a value of 0, 1 or **NULL**.
- **binary(n)** variables store n bytes of fixed-size binary data. They may store a maximum of 8,000 bytes.
- **varbinary(n)** variables store variable-length binary data of approximately n bytes. They may store a maximum of 8,000 bytes.
- **varbinary(max)** variables store variable-length binary data of approximately n bytes. They may store a maximum of 2 gigabytes.
- **image** variables store up to 2 gigabytes of data and are commonly used to store any type of data file (not just images).



## 2. Introduction to Databases

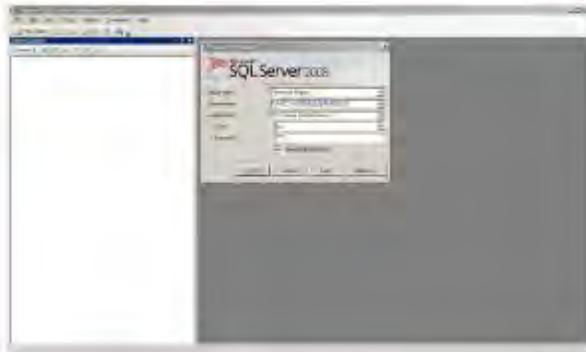
- How to get data out of a table... the SELECT statement.

Select field1, field2, field 3 from tablename

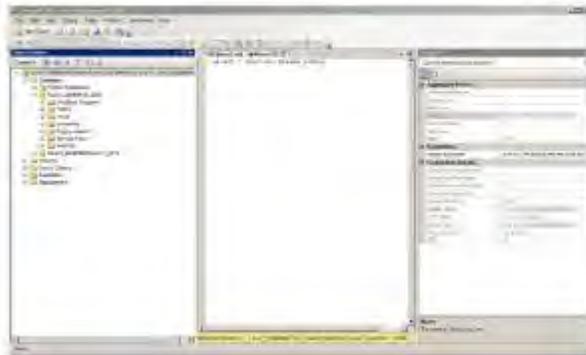
Select \* from tablename



## 2. Introduction to Databases



## 2. Introduction to Databases



## 2. Introduction to Databases

- How to filter data from a query?
  - The WHERE clause

```
SELECT field1, field2 from TABLENAME  
WHERE field1='value'
```



## 2. Introduction to Databases

- Background info on tables. How do we manage creation of tables, and the data in those tables?
  - CREATE Table command
  - INSERT command
  - UPDATE command
  - DELETE command
  - TRUNCATE command
  - DROP TABLE command
  - ALTER table command



## 2. Introduction to Databases

- Create Table syntax

```
CREATE TABLE "table_name"  
("column 1" "data_type_for_column_1",  
"column 2" "data_type_for_column_2",  
... )
```



## 2. Introduction to Databases

- INSERT INTO syntax

```
INSERT INTO "table_name" ("column1",  
"column2", ...)  
VALUES ("value1", "value2", ...)
```



## 2. Introduction to Databases

- UPDATE Table syntax

```
UPDATE "table_name"  
SET column_1 = [value1], column_2 =  
[value2]  
WHERE {condition}
```



## 2. Introduction to Databases

- DELETE syntax

```
DELETE FROM "table_name"  
WHERE {condition}
```



## 2. Introduction to Databases

- TRUNCATE Table syntax

```
TRUNCATE TABLE "table_name"
```



## 2. Introduction to Databases

- DROP Table syntax

```
DROP TABLE "table_name"
```



## 2. Introduction to Databases

- ALTER Table syntax –examples to add column, or alter data type

```
ALTER TABLE "table_name" ADD ("column
x" char(30), "column y" char(20));
```

```
ALTER TABLE "table_name"
ALTER COLUMN "column 1" "New Data
Type"
```



## 2. Introduction to Databases

- METADATA – info about your database

```
• SELECT * FROM sysobjects
WHERE xtype='U'
```

```
• SELECT syscolumns,*
FROM syscolumns JOIN sysobjects
ON syscolumns.id=sysobjects.id
WHERE sysobjects.name='tablename'
```

```
• exec sp_columns @table_name=tablename
```



## 2. Introduction to Databases

- ALTER Table syntax –examples to add column, or alter data type

```
ALTER TABLE "table_name" ADD ("column  
x" char(30), "column y" char(20));
```

```
ALTER TABLE "table_name"  
ALTER COLUMN "column 1" "New Data  
Type"
```



## 3. Advanced Queries

- Aliases  
SELECT field1 as DOGS, field2 as CATS  
FROM table1



### 3. Advanced Queries

- LIKE Statement

```
SELECT field1, field2
FROM table1
WHERE field1 LIKE '%substring1%'
```



### 3. Advanced Queries

- CASE statement

```
SELECT
CASE field1
  WHEN 'a' THEN 'value1'
  WHEN 'b' THEN 'value2'
  ELSE 'value3'
END as newFieldName
FROM table1
```



### 3. Advanced Queries

- DISTINCT

```
SELECT DISTINCT(field1) as DOGS  
FROM table1
```



### 3. Advanced Queries

- AGGREGATE FUNCTIONS

```
SELECT Max(field1) as BIGGESTDOG  
FROM table1
```

Other common aggregate functions:  
SUM, MIN, MAX, COUNT, AVG



### 3. Advanced Queries

- IsNull; IS NOT NULL

```
SELECT IsNull(field1, 'replacement value')  
FROM table1
```

```
SELECT field1  
FROM table1  
WHERE field1 IS NOT NULL
```



### 3. Advanced Queries

- GROUP BY
  - When using aggregate functions, all other fields must be contained in a GROUP BY clause

```
SELECT Max(field1) as BIGGESTDOG, field2,  
field3  
FROM table1  
GROUP BY field2, field3
```



### 3. Advanced Queries

- **HAVING**

- When using aggregate functions, you can set function criteria in a HAVING clause

```
SELECT Max(field1) as BIGGESTDOG, field2,  
       field3  
FROM table1  
GROUP BY field2, field3  
HAVING Max(field1) < 25
```



### 3. Advanced Queries

- **Boolean Operators**

- Parenthesis are your friend
- Be careful when stacking operators that you are asking the right question

```
SELECT field1, field2  
FROM table1  
WHERE (field1='value1' OR field1='value2') AND field2 =  
       'value3'
```

- Boolean Operators: AND OR



### 3. Advanced Queries

- **IN and BETWEEN**

- Allow you to filter conditionally, or based on another select

```
SELECT field1 as MediumDOG
FROM table1
Where field1 in ('value1', 'value2', 'value3')
```

```
SELECT field1 as MediumDOG
FROM table1
Where field1 BETWEEN value1 AND value2
```



### 3. Advanced Queries

- **VIEWS**

- Views allow you to treat a query as if it were its own table (more details to follow, but introducing the concept here)

```
CREATE VIEW view1 AS
SELECT Max(field1), field2, field3
FROM table1
WHERE ...
```

Then...

```
SELECT * FROM view1
```



#### 4. Dealing with Multiple Tables

- Why do we need to access multiple tables in a single query?
- Review of the concept of relational databases
- Ability to extract useful, real world information in a single query.



#### 4. Dealing with Multiple Tables

- INNER JOIN: most closely related to a standard where clause
- OUTER JOIN: most often used when there are criteria where data is likely to be missing in one of the tables
- SELF JOIN: a general term used to referencing a single table as if it were multiple tables. Accomplished by aliasing the table with different names.
- UNION: a means to join more than one query result set into a single result set.



#### 4. Dealing with Multiple Tables

- Two approaches to multiple tables:

```
SELECT a.field1, b.field2  
FROM table1 a, table2 b  
WHERE a.field1=b.field1
```

```
SELECT a.field1, b.field2  
FROM table1 a  
INNER JOIN table2 b  
ON a.field1=b.field1
```



#### 4. Dealing with Multiple Tables

- UNION: Joining multiple queries

```
SELECT a.field1, b.field2  
FROM table1 a, table2 b  
WHERE table1.field1=table2.field1  
UNION  
SELECT a.field1, b.field2  
FROM table3 a, table4 b  
WHERE table1.field1=table2.field1  
ORDER BY 1,2
```



#### 4. Dealing with Multiple Tables

- Why do we need to access multiple tables in a single query?
- Review of the concept of relational databases
- Ability to extract useful, real world information in a single query.



#### 5. General Review

- Interactive Q&A about Materials presented.
- Exercises from the sample database to reinforce all the skills presented



## 6. Tackling the EMIS database

- Attaching the EMIS database
- Discussion of the general database design
- General queries of the EMIS database



## 6. Tackling the EMIS database

- Schools Query:
  - Develop a query that uses ONE table, and presents the following information:
    - School ID
    - School Name and School Code as one field



## 6. Tackling the EMIS database

- Teachers Query:

- Develop a query that uses TWO tables, and presents the following information:

- Year
    - School ID
    - Gender
    - Count



## 6. Tackling the EMIS database

- Teaching Qualifications Query:

- Develop a query that uses TWO tables, and presents the following information:

- What school does a teacher belong to?
    - What are their qualifications?



## 6. Tackling the EMIS database

- Enrolment Query:
  - Develop a query that uses TWO tables, and presents the following information:
    - What are the enrolment numbers by gender, school class, and year?



## 6. Tackling the EMIS database

- Available Seats Query:
  - Develop a query that uses THREE tables, and presents the following information:
    - What are the number of available seats available to each class by school and year?



## 6. Tackling the EMIS database

- Classroom Condition Query:
  - Develop a query that uses aggregate functions and presents the following information:
    - For each school what are the number of classrooms not in use, in good condition, in need of minor repairs, and in need of major repairs (by year)?



## 7. Advanced Topics for Discussion

- Intro to MS Access SQL and differences from MS SQL
- Brief introduction into database normalization
- Brief introduction into stored procedures
- Database normalization and advanced database design.
- General discussion of topics of interest to the group, and more queries!



## **Module 2**

## EMIS Toolbox Advanced User Training

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*March 24th–28th, 2014 – Benin City, Nigeria*

**Day 1:** Review of SQL Server Management Studio, SQL Language Syntax, EMIS Toolbox Analysis and Configuration

**Day 2:** Advanced SQL Topics, Joins, and Aggregate Functions

**Day 3:** Data Analysis with EMIS Toolbox

**Day 4:** EMIS Toolbox Configuration, Overview of Base Indicators, Review of the NEMIS Data Model and Mapping

**Day 5:** Data import Tool, importing from ESSPIN, old NEMIS. Troubleshooting the import process (advanced training)



# Review of SQL Server Management Studio, SQL Language Syntax, EMIS Toolbox Analysis and Configuration

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*Day 1*

- **Introduction**
- **Review**
  - Tools
  - SQL Server Management Studio
  - SQL Language Syntax
  - EMIS Toolbox
- **Lab 1:** Getting your very own server up and running
- **Tea Break**
- **Overview of the NEMIS Database**
- **Lab 2:** Getting Familiar with the NEMIS Database
- **Overview of the EMIS Toolbox**
- **Lunch**
- **Structured Query Language (SQL) Basics**
- **Lab 3:** Running your first report
- **Wrap up**

---

EMIS Toolbox Advanced User Training

# EMIS Toolbox Advanced User Training

Review of SQL Server Management Studio, SQL Language Syntax, EMIS Toolbox Analysis and Configuration

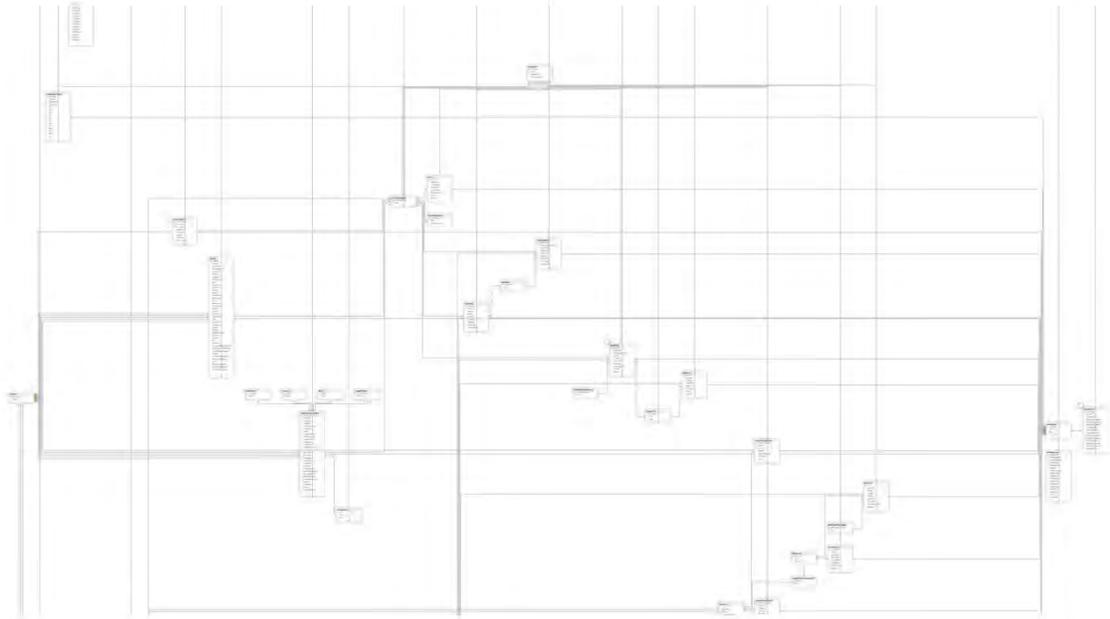
## Welcome

- Introductions
- Format
- Resources
- Ground Rules

## Review of Tools

- SQL Server Management Studio
- EMIS Toolbox
  - Java Application Server
  - Google Web Toolkit (GWT)

# Overview of the NEMIS Database



## Schools Table

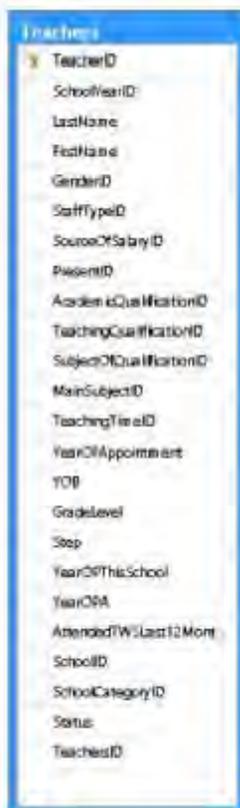
The screenshot shows a list of columns for the 'Schools' table. The columns are: SchoolID, Name, LocationCode, StateID, Local, DistrictID, DistrictName, CountyID, CountyName, RegionID, RegionName, MediumID, MediumName, Level, LevelID, Official, SchoolStatus, Name, OfficialName, Address, State, Country, and OfficialID.

- Directly corresponds with the census form
- Primarily stores categorical information about a school
- Corresponds to Section A of the census form

## Enrollment Table

The screenshot shows a list of columns for the 'Enrollments' table. The columns are: EnrollmentID, SchoolID, ClassTypeID, AgeGroupID, SchoolYearID, Num OffMales, Num OffFemales, EntryDate, and SchoolCategoryID.

- Stores information about enrollments
- Corresponds to section C.1, C.2, C.3 of the census form



Teachers
TeacherID
SchoolYearID
LastName
FirstName
GenderID
StaffTypeID
SourceOfSalaryID
PresentID
AcademicQualificationID
TeachingQualificationID
SubjectQualificationID
MainSubjectID
TeachingTimeID
YearOfAppointment
YOB
GradeLevel
Step
YearOfThisSchool
YearOfA
AttendedTWLast12Mont
SchoolID
SchoolCategoryID
Status
TeachersID

## Teacher Table

- Stores categorical information about teachers
- Has relationship to a School
- Corresponds to Section D of the Census form

## Structured Query Language (SQL) Basics

- The user specifies a certain condition
- The program will go through all of the records in the database and return those records that satisfy the condition
- The results of the query will be returned in the form of a table

SchoolId	Code	Name	InstitutionType	LGAId	Ownership
130519	AK012P34	ANNAG PEOPLES SCHOOL	3	39	2
130520	AK012231	BISHOP CLARK'S CENTRAL SCHOOL	5	39	2
130521	AK012P00	CENTRAL NURSERY/PRIMARY SCHOOL	4	39	2

## Anatomy of a Query

**Select:** what do you want from the database

**From:** where is stored in the database

**Where:** How should the the results be filtered

Example:

```
SELECT SchoolId
```

```
FROM Schools
```

```
WHERE Lgald = 455
```

# Getting your very own server up and running

---

## Lab 1

### Objective

In order to run the EMIS Toolbox server on your own computer, two separate software packages are required: SQL Server Express and the EMIS Toolbox.

1. Install the SQL Server Express (SQLEXPRT). When prompted accept the default options.
2. Install EMIS Toolbox (emistoolbox.exe)
3. Update the emistoolbox.war application by copying the file into the [EMIS Toolbox Installation Folder ]\bin\jetty\webapps
4. Double click on the EMIS Toolbox Application. This should automatically open the EMIS Toolbox application in Internet Explorer.

### Questions

1. What are the two main components the EMIS Toolbox server?



## Getting Familiar with the NEMIS Database

---

### Lab 2

#### Objective

The NEMIS database is run on Microsoft SQL server, one of the leading databases on the market today. The tools that you installed today will allow you to view and update the database including adding new data as well and modifying the structure of the database. When an entry is submitted using the web based data entry module, those results are stored in the NEMIS database. The objective of this lab is to just get familiar with the structure of the NEMIS database and SQL Server Management Studio, the tool used for NEMIS database administration.

1. Download the NEMIS database from (NEMIS\_DB.mdf and NEMIS\_DB.ldf)
2. After logging in, open SQL Server Management Studio and right click on the Databases folder and select the Attach option. Browse to the NEMIS database

#### Questions

1. Where is enrollment data stored?
2. How many fields are stored on the Schools table?



## Running your first report

---

### Lab 3

#### Objective

Use EMIS Toolbox to run

1. Go here: <http://192.168.10.149:8888/emistoolbox/>
2. Click on the Analysis tab, click on the Maps tab then specify state as the plot location and School Count as the indicator, and 2008 as the years.

#### Questions

1. According to the results what state had the largest number of schools in 2008
2. According to the results what state had the smallest number of schools in 2008
3. How many schools are in FCT in 2008



## Advanced SQL topics: Joins, Aggregate functions

---

*Day 2*

- **Review**
- **Bringing it all together with SQL Joins**
- **Lab 4:** Joining tables in the NEMIS database
- **Tea Break**
- **Narrowing the results with Query Conditions**
- **Lab 5:** Find what you are looking for in the NEMIS database
- **Lunch**
- **Harnessing the true power of a database**
- **Lab 6:** Fun with aggregate functions
- **Wrap up**

# EMIS Toolbox Advanced User Training

Advanced SQL topics, joins, aggregate functions.

## Bringing it all together with SQL Joins

- Why do we need to Join tables to begin with?



SchoolId	Code	Name	EstablishmentYear	Lga	State
130519	AK011321	15 Towns Army Church	1940	ABAK	AKWA IBOM
130520	AK023423	ABAK INT PRIMARY	1993	ABAK	AKWA IBOM

SchoolId	Code	Name	EstablishmentYear	Lga
130519	AK011321	15 Towns Army Church	1940	ABAK
130520	AK023423	ABAK INT PRIMARY	1993	ABAK

Lga	State
ABAK	AKWA IBOM
ESSIEN UDIM	AWKA IBOM

## Narrowing the Results with Query conditions

- Comparison operators
  - Equals, =
  - Not Equals, !=
  - Greater Than, >
  - Less Than, <

## Using Comparison Operators

- `SELECT * FROM Schools WHERE Schools.Name = 'SAINTS NURSERY SCHOOL'`
- `SELECT * FROM Schools WHERE Schools.Name != 'SAINTS NURSERY SCHOOL'`

## Using Logical Operators

- Logical Operators
  - AND
  - OR
  - LIKE
  - IN

## Harnessing the true power of a database

- Aggregate Functions
  - Count
  - Max
  - Avg

## Using Aggregate Functions

- `SELECT Count(*) FROM Schools`
- `SELECT MAX(SchoolID) FROM Schools`

## Joining tables in the NEMIS database

---

### Lab 4

#### Objective

Understand the purpose and the syntax one of the most fundamental concepts of a relational database.

1. Open SQL Server Management Studio and login using Windows Authentication.
2. Click on the New Query button to write your query. Ensure that you are connected to the NEMIS\_DB database in the upper left hand corner of the screen.

#### Questions

1. How many schools Edo State in 2013?
2. How many classrooms are in Edo State in 2013?
3. What explains the difference in the number of classrooms between 2013 and 2008?



## Answers

1.  

```
SELECT count(*) FROM Schools  
INNER JOIN States ON Schools.StateID = States.StateID  
WHERE State.Name = 'EDO'  
AND School.CensusYear = '2013'
```
2.  

```
SELECT count(*) FROM Schools  
INNER JOIN States on Schools.StateID = States.StateID  
INNER JOIN Classrooms ON Schools.SchoolID = Classrooms.SchoolID  
WHERE State.Name = 'EDO'  
AND School.CensusYear = '2013'
```

## Find what you are looking for in the NEMIS database

---

### Lab 5

#### Objective

Understand the purpose and the syntax of the logical operators and comparison operators

1. Open SQL Server Management Studio and login using Windows Authentication.
2. Click on the New Query button to write your query. Ensure that you are connected to the NEMIS\_DB database in the upper left hand corner of the screen.

#### Questions

1. How many Schools are in Edo state where with less than 10 females in 2013?
2. What School in Edo state has less than 3 females and less than 3 males in 2013?
3. What school in Edo state has 22 males enrolled in 2013?



# Fun with Aggregate Functions

---

## Lab 5

### Objective

Understand the purpose and the syntax of the logical operators and comparison operators

1. Open SQL Server Management Studio and login using Windows Authentication.
2. Click on the New Query button to write your query. Ensure that you are connected to the NEMIS\_DB database in the upper left hand corner of the screen.

### Questions

1. What school has the earliest established year ?
2. What is the average female enrollment in Edo State in 2013?
3. What School has the highest female enrollment in Edo state in 2013?



## Data Analysis with EMIS Toolbox

---

*Day 3*

- **Review**
- **Lab 7:** More fun with Aggregate Functions
- **Tea Break**
- **EMIS Toolbox: An Architectural Review**
- **Hands on with the EMIS Toolbox**
- **Lab 8:** Creating Your First Indicator
- **Lunch**
- **Putting data on a map**
- **Lab 9:** Fixing problems with the Geo-political boundaries
- **Wrap up**

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EMIS Toolbox Advanced User Training

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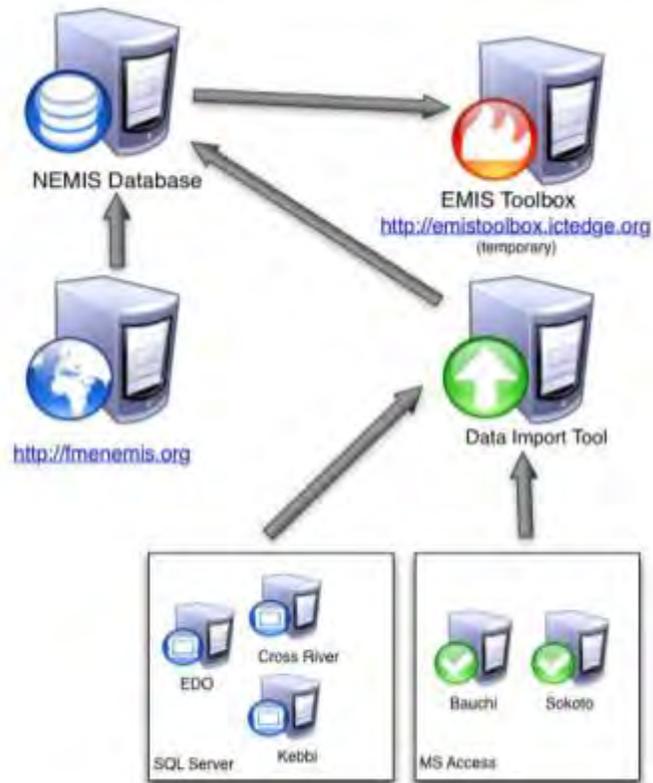
# EMIS Toolbox Advanced User Training

Data Analysis with EMIS Toolbox

## More Fun with Aggregate Functions

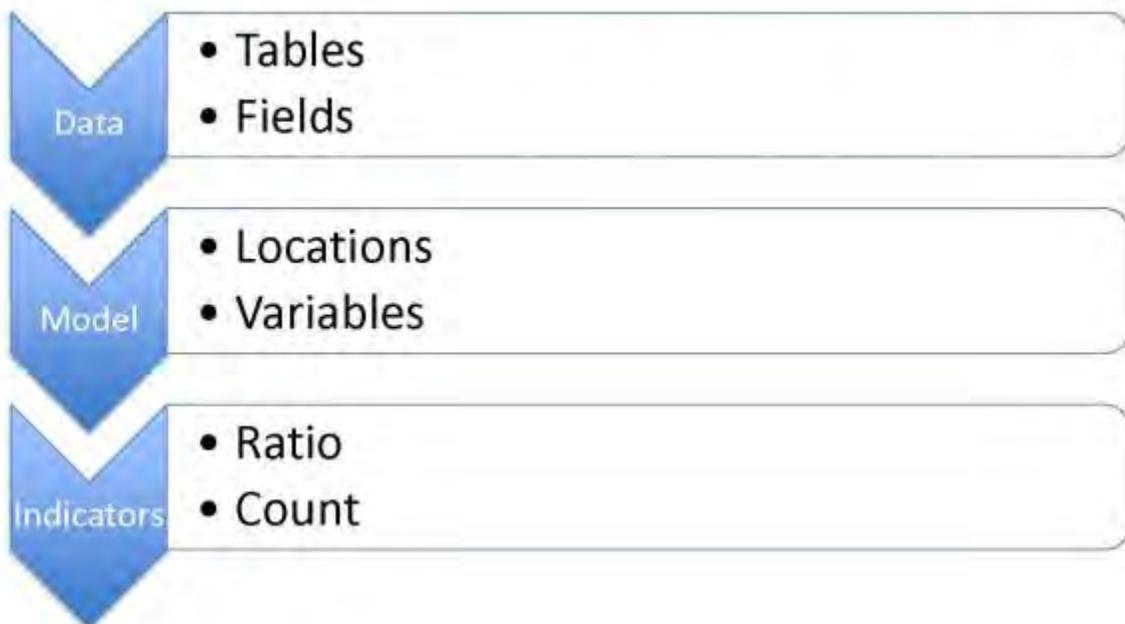
- Review
  - Logical Operators
    - AND, OR, IN,
  - Comparison Operators
    - =, !=, <, >
  - Displaying aggregate data and non aggregate data at the same time with the Group By statement
  - Ordering results





EMIS Toolbox Architecture

## Hands on with the EMIS Toolbox



# Indicators

- Represent real world metrics
- Virtually unlimited
- Types
  - Count
  - Ratio

# Using Maps



- ESRI SHP Files (pronounced shape files)
- GIS Data is usually provided by governmental agencies. Less reliable GIS data can be obtained elsewhere on the Internet
- Free and Open Source tools
  - Quantum GIS (a.k.a QGIS)

## More Fun with Aggregate Functions

Lab 7

### Objective

Understand the purpose and the syntax aggregate functions.

1. Open SQL Server Management Studio and login using Windows Authentication.
2. Click on the New Query button to write your query. Ensure that you are connected to the NEMIS\_DB database in the upper left hand corner of the screen.

### Questions

1. How many private schools are in Edo state in 2013?
2. What school has the highest number of female enrollments in 2013?
3. ?
4. How many Pre-primary schools are in Edo state in 2013?
5. Write a query to return the number of schools for each state.

(hint: your result set will look like this...)

State Name	Number of Schools

6. Write a query to find the total females and males for each classtype and census year.

(hint: your result set will look like this...)

SchoolID	NumOfFemales	NumOfMales	ClassTypeId	CensusYear



# Creating Your First Indicator

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## Lab 8

### Objective

Understand the process for defining indicators in EMIS Toolbox

1. Go here: <http://192.168.10.149:8888/emistoolbox>
2. In the upper right hand corner of the application, ensure that the default dataset is selected
3. Click on the Analysis Tab and click on the Add Count button to add a Count type indicator
4. Name this indicator 'School Count' and select the School Count data field

### Questions

1. How many schools are in the North West Region in 2013?
2. Which years is there School data in the South South Region?
- 3.



# Fixing Problems with Geo-Political Boundaries

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## Lab 9

### Objective

Understand how to address common errors when plotting data on a map

1. Plot the School Count indicator on the national map, there are errors in the geo political boundaries and notice errors in defining certain geo political boundaries.
2. Update the hierarchy mapping, and reimport.

### Questions

What tool can be used to update shp files?



# EMIS Toolbox Advanced User Training

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*Day 4*

- **Review**
- **Overview of the EMIS Toolbox Configuration Mode**
- **Lab 10:** Building the School Count Indicator from scratch
- **Tea Break**
- **Indicators, Indicators, and more Indicators**
- **Lab 11:** Using SQL Queries to get the just the right data for EMIS Toolbox
- **Lunch**
- **Deep Dive into Database Mapping**
- **Introduction to Data Import**
- **Wrap up**

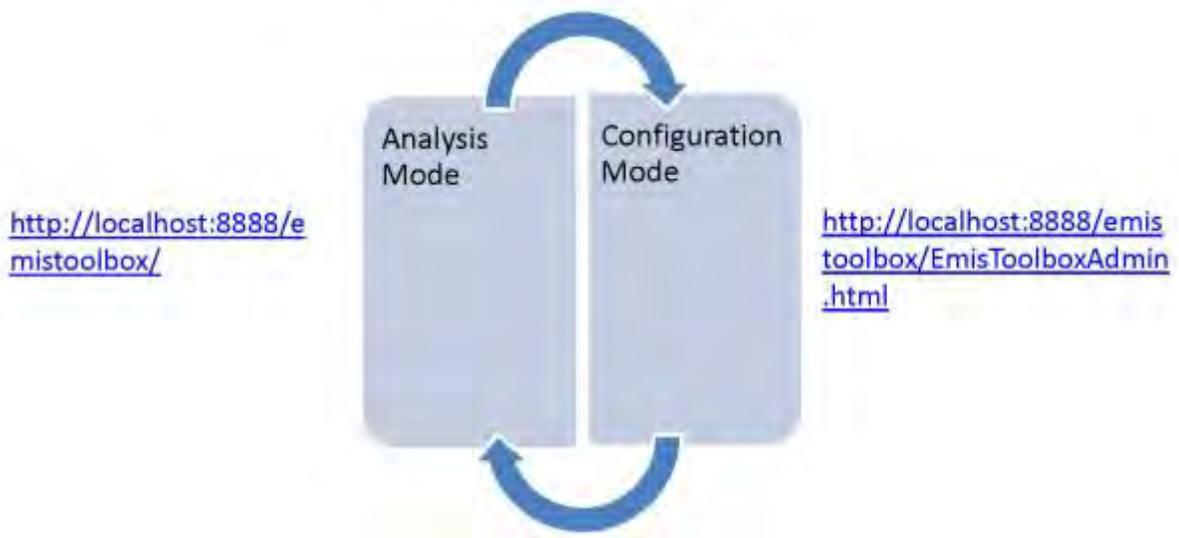
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EMIS Toolbox Advanced User Training

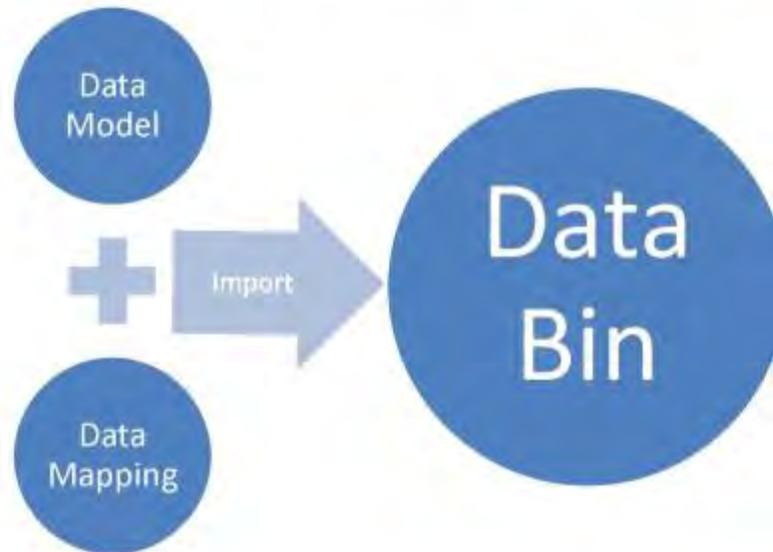
# EMIS Toolbox Advanced User Training

EMIS Toolbox Configuration, Overview of Base Indicators, Review of the NEMIS Data Model and Mapping

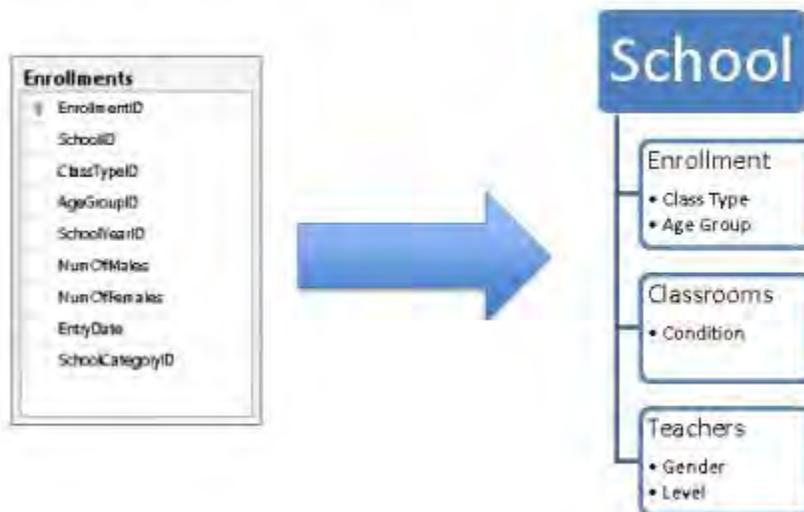
## Overview of EMIS Toolbox Configuration Mode



# EMIS Toolbox Data Import



## Deep Dive into Database Mapping



## Building the School Count Indicator from scratch

Lab 10

### Objective

Create a model for School Classrooms and map that model to the NEMIS database.

1. If it's not started already, start EMIS Toolbox by double clicking on the EMIS Toolbox icon on your desktop.
2. Open this page in either Firefox or Chrome:  
<http://localhost:8888/emistoolbox/EmisToolboxAdmin.html> and click on the dataset link in the upper right hand corner
3. Click 'New' to create a new dataset. Name this dataset: Benin EMIS Toolbox Training
4. Click on the Data Mapping tab and define a new data source with the following parameters:

**Data Source Type:** MSSQL  
**Host:** 192.168.10.150  
**Database Name:** NEMIS\_DB  
**User Name:** emis  
**Password:** toolbox

Click on the Manage Data tab then back to the Data Mapping tab to ensure that the connection is established successfully. Now, click back on the Manage Data tab and then on the save button to save your dataset.

5. Click on the Data Model table, then on the Dates tab and add a new date called "Year." Click on the word year and add the following years: 2008, 2009, 2013, 2014.
6. Click on the Location tab and add a location named School, LGA, and State
7. Click on the Hierarchy tab and add a hierarchy named default and add the locations State, LGA, and School (in that order).
8. Go back to the Data Mapping tab and view the missing configurations. Add Year mapping for School, State, and LGA Location.
9. Add the hierarchy mappings for LGA > State and School to LGA, make sure that you check the box for "Loop across year (using context variable)"



10. Click Save on your dataset in the Manage Data tab then over to the Import tab verify that each mapping is valid by using the Test Import button. When all errors have been satisfied, click the Import button.
11. Go back to <http://localhost:8888/emistoolbox/> go to the Indicator tab and create a new "Count" Indicator. Name it School Count and select School (count) as the data field.

#### Questions

1. What state has 2671 schools in 2008?

## Using SQL Queries to get the just the right data for EMIS Toolbox

Lab 11

### Objective

Understand what classifications are and how they are used within EMIS Toolbox.

1. Go to the Configuration Mode:  
<http://localhost:8888/emistoolbox/EmisToolboxAdmin.html>
2. Click on the Data Model tab and then on Classifications to add your first Classification. Name this classification "Class Type" and assign the values as the names found in the Class Type table. Add another classification called "Gender" and assign it value "female" and "male." Save your data set in the Manage Data tab when complete.
3. In the Data Model tab add the enrollment variable to the School location and specify it as an integer with a 2 dimensional array. Next go to the Data Mapping and complete the mapping. Save your data set in the Manage Data tab when you're done.
4. In the Manage Data tab go to Import and reimport the data, resolve any import errors that may occur.

### Questions

1. What report can be run to view this data?



# Building the School Enrollment Indicator

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Lab 12

Objective

Questions



## The Data Import Process

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Day 5

- **Review**
- **Overview of the Data Import Process**
- **Lab 13: Hands on with the Data Import Tool**
- **Tea Break**
- **Importing NEMIS 1.0 Data**
- **Lab 14: Troubleshooting the Data Import Process**
- **Importing ESSPIN Data**
- **Lunch**
- **Discussion: A Data Import Workflow**
- **Wrap up**

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EMIS Toolbox Advanced User Training

# **EMIS Toolbox Advanced User Training**

Data import Tool, importing from ESSPIN, old NEMIS. Troubleshooting the import process (advanced training ).

## **Overview of the Data Import Process**

### **Importing NEMIS 1.0 Data**

# **Importing ESSPIN Data**

## **A Data Import Workflow**

# Hands on with the Data Import Tool

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Lab 13

Objective

Questions



# Troubleshooting the Data Import Process

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Lab 14

Objective

Questions



# EMIS Toolbox

Advanced User Training: March 24th – 28th 2014

Feedback Form

1. How do you rate the overall quality of the training? (circle one)

Poor      Needs Improvement      Fair      Good      Excellent

2. How comfortable are you in using the EMIS Toolbox Analysis interface?  
(circle one)

1    2    3    4    5    6    7    8    9    10

3. How Comfortable are you in using in using the EMIS Toolbox  
Configuration interface? (circle one)

1    2    3    4    5    6    7    8    9    10

4. What did you like about the training?

5. What would you like to see done differently?

Comments:

Thank you for your participation!