Re-imagining the future of Education Management Information Systems
Ré-imaginer l'avenir des systèmes d'information pour la gestion de l'éducation

Day 1 / Jour 1
Day 1

Session 1.1: Experience sharing, and lessons learned from the COVID-19 crisis: Country perspective

Introduction: Gwang-Chol Chang, UNESCO

a) Li Yanli, China

b) Leticia Mirás, Argentina

c) Husein Abdul-hamid, World Bank

d) Abdullaev Alisher, Republic of Uzbekistan

Session 1.2: Experience sharing, and lessons learned from the COVID-19 crisis: Global and regional perspective

a) Margaret Irving, GPE Secretariat

b) Asallane Ouedraogo, UNICEF MENARO

c) Silvia Montoyo, UNESCO-UIS
Futures of EMIS
Re-imagining data systems beyond head counts
Evolving Expectations of EMIS 1

Figure 5. New or adapted education variables collected during COVID-19

First variable reported

All variables reported
Raising the bar on EMIS roles and responsibilities

Demand for data & crisis resilience

- Availability of more powerful technologies
- Increased expectations on EMIS to support planning, monitoring & evaluation
- Monitoring national and international standards (SDGs)
- Public demand for accountability in education
- Growing complexity of education systems
- Increase in focus on outcomes instead of inputs/outputs

6 factors identified in 2018

Real-Time Data

Learning Management

2 new factors for 2021
Defining EMIS for 2021

Call for Consensus on Definition

*Integrated & inclusive, adaptable & accessible, scalable & sustainable*

- Collects, processes, manages, and transforms data into usable information
- Supports management and administration, planning, policy formulation, and monitoring and evaluation of education
- Enabled by technology, institutional capacity, strong legal frameworks, and integration across education system and with social sectors
- Supports equitable teaching and learning and the improvement of learning outcomes for all, including vulnerable learners and distance learning in data collection
### 4 Dimensions of Data Quality

<table>
<thead>
<tr>
<th>Challenge</th>
<th>COVID-19 Spotlight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data timeliness</strong></td>
<td>• EMIS lack <strong>real-time</strong> data on schools, students and teachers to respond to <strong>urgent educational needs</strong></td>
</tr>
<tr>
<td><strong>Data relevance and completeness</strong></td>
<td>• EMIS lack <strong>agility</strong> or <strong>adaptability</strong> to provide data on <strong>all</strong> children and monitor distance learning participation <strong>beyond the school building</strong></td>
</tr>
<tr>
<td><strong>Data availability and use</strong></td>
<td>• EMIS lack the <strong>open data culture and data literacy</strong> for frequent, user-friendly data use and analysis</td>
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<tr>
<td><strong>Data beyond school census</strong></td>
<td>• EMIS lack <strong>coordination and linkages with other data systems</strong> (i.e. health, household, finance, LMS, assessment)</td>
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</tbody>
</table>
## How to meet EMIS expectations

<table>
<thead>
<tr>
<th>Systemic considerations</th>
<th>Technological considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen legal, political, and institutional frameworks</td>
<td>Big Data</td>
</tr>
<tr>
<td>Build human, technical, institutional and organizational capacities</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>Increase data coordination and support data collection training</td>
<td>Blockchain</td>
</tr>
<tr>
<td>Recognize flexible learning models</td>
<td>Non-education data system integration (geospatial, climate, health, etc.)</td>
</tr>
</tbody>
</table>
Building a community of practice

Proposed Objectives

- Standard-setting for future EMIS
- Knowledge generation and dissemination
- Sharing of best practices and mutual learning
- Facilitating IT development and connectivity
- Capacity development & supporting the EMIS transformation paths
Building a community of practice

Proposed Key Principles

- Open, complete and inclusive data
- Interoperability and integration
- Bias-free algorithms
- Data privacy and legal ownership
- Affordability and accessibility
- Scalability and sustainability
- Focus on local ecosystems and capacity development
Re-imagining Education Management Information Systems

**Day 1** 26 May 2021, 13:30 - 15:30 (CET)

**Opening Remarks**
- Stefania Giannini
  Assistant Director-General, Education
  UNESCO

- Alice Albright
  Chief Executive Officer
  GPE Secretariat

- Dai Shen
  Senior Vice-President
  Weidong Cloud Education Group

**Introductory Presentation**
- Gwang-Chol Chang
  Chief, Section of Education Policy
  UNESCO

**Session 1.1: Country Experiences**
- Li Yanli
  Department of Development
  Ministry of Education, China

- Leticia Miras
  Director of Educational Information
  Ministry of Education, Argentina

- Husein Abdul-Hamid
  Senior Education Specialist
  The World Bank

**Moderator**
- Nicolas Reuge
  Senior Education Adviser
  UNICEF

**Session 1.2: Partner Experiences**
- Abdullaev Alisher
  Head of ICT Department
  Ministry of Higher & Secondary Specialized Education, Uzbekistan

- Utkir Khamdamov
  Professor
  Tashkent University of Information Technology

- Margaret Irving
  Education Economist
  GPE Secretariat

- Alassane Ouedraogo
  Education Specialist
  UNICEF MENARO

- Silvia Montoya
  Director
  UNESCO-UIS

- Tao Zhan
  Director
  UNESCO - IITE
Thank you

Learn more: www.unesco.org/education

@UNESCO

Gwang-Chol Chang, Chief of Education Policy
UNESCO
gc.chang@unesco.org
Session 1.1: Experience sharing, and lessons learned from the COVID-19 crisis:

Country perspective
EMISs and Decision Making in Education:

the Situation in China

International Seminar on “Re-imagining the future Education Management Information Systems”

Ministry of Education
The People's Republic of China
Overview

- **Essential for macro-management and scientific decision-making**

530,000 schools (institutions); 290 million students; over 20 million teaching and administrative staff

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Bureau of education at all levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection</td>
<td>Schools</td>
</tr>
<tr>
<td>Summarize Review</td>
<td>Bureau of education at all levels</td>
</tr>
<tr>
<td>Report Analysis Application Service</td>
<td>Other ministries International organizations Public</td>
</tr>
</tbody>
</table>

- **June**
- **July-Aug.** → School Codes System
- **Sept.** → Statistics Management System
- **Oct.** → Decision making system
- **Nov.** → Statistics Service Platform
- **Dec.**
- **Jan.**
- **Feb.-Mar.** Needs Assessment Improve System Performance
- **Apr.**
- **May**

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**Statistical Norms**
- Common Education Data Standards (CEDS)
- International Standard Classification of Education (ISCED)
- Educational management general codes

**Quality assurance**
- All staff training (include online)
- Quality verification

**Information Technology**
Overview

EMIS of China and the integrated services
- collection, summary and release of statistical data;
- data application of integrated service platform

- International Education Statistics
- International Economic and Social Statistics
- National Education Policy Data
- Domestic economic and social statistics
- At-a-glance statistical data over the years
- ......
Data-Driven Educational Decision Making

- **Data release**
  various kinds of statistical results: statistical reports in the forms of statistical bulletins, newsletters, etc.

- **Monitoring and early warning**
  help educators systematically identify situations showing signs that they are at risk

- **Educational planning**
  making full use of the statistical data, helping to determine planned objectives, and allocating resources well.
Data release

Educational Data 2012-2016

SDG4: progress in China

China Education Yearbook
Monitoring and early warning
International comparison

China in the World

High income countries

Middle income countries

G20 countries
Educational planning

Demand for pre-primary education 2020
COVID-19 response in EMIS and data

- **Bring together all the aspects of human society:** government, school, enterprise
  The broadband networks, cloud services, free cell phone data and other services ensure stable operation of distance education communication platforms

- **Use the Internet education platform and resources to realize ‘Suspended class, ongoing learning’ in the super large-scale**
  The National Cloud Learning Platform and CETV have developed an online classroom to provide free learning sources for all the areas
COVID-19 response in EMIS and data

Data platform for the national education system to fight against the COVID-19 epidemic

- **Domestic**
  - Basic situation of the country (diagnosed, suspected, dead, cured)
  - Education system (diagnosed, suspected, dead, cured)
  - Colleges
  - School student situation

- **International**
  - Global epidemic data
  - Situation of International Students
  - Situation of foreign teachers
COVID-19 response in EMIS and data

Home study: Primary school students from Shanghai

National Cloud Learning Platform

National Public Service Platform for Educational Resources

China Education Network Television
COVID-19 response in EMIS and data
Challenges

- **Support and inform student learning better**
  working hard to connect multiple platforms and other systems in order to maximize the utilization of education statistics data.

- **Dealing with diverse learning environments**
  learn from international experience and solve the difficulties and shortcomings of traditional data in dealing with diverse learning environments.
Thank you!

International Seminar on “Re-imagining the future Education Management Information Systems”

Ministry of Education
The People's Republic of China
Education Management Information Systems

Argentina

Leticia Mirás

May, 26 2021
República Federal Argentina

Population: 45.800.000
Area: 3.761.274 Km²

Students: 15.300.00
Teachers: 1.500.000
Schools: 63.000  Universities: 131
National Educational Information Systems
- Early childhood education to Higher non university education levels -

**Padrón Nacional de Establecimientos Educativos**
- National catalog of educational institutions
- Location, sector, type of institution, level, authorities
- Permanent actualization

**Relevamiento Anual**
- National census of schools, students and teachers
- Enrolments, gender, age, trajectories, infrastructure, connectivity
- Annual actualization

**SINIDE**
- Digital Educational Information System
- Management information system
- Students component
- National hologate nominal data base
- Teacher component
- Infrastructure component

**Federal Educational Infrastructure Census**

**National Teacher Census**
Requirements for education management information systems during the pandemic

- Amount of **students disengaged** during the mandatory social isolation
- Management of the **teacher's vaccination** schedule
- **Monitoring of contagion** during the schools reopening
SINIDE – Acompañar

- Nominal register
- Secondary level
- Engagement level (attendance and performance)
- 2.3 millions of register
Teacher’s register

- All levels teachers and staff showing willingness to get the vaccine
- Shared with provincial authorities
- 250,000 register

https://www.argentina.gob.ar/coronavirus/vacuna/docentes
Cuidar escuelas

- Developed in cooperation with the Ministry of Health
- To aid in the epidemiological surveillance
- Covid-19 positive or suspect cases of students, teachers and staff
- Nominal registers, personal information, date of notification, date of onset of symptoms

https://cuidaescuelas.argentina.gob.ar/
Argentina managed to develop a productive EMISs with the following features:

- **Real time** information systems for decision making
- **Decentralized** data entry
- Usable **nominal register databases** (secondary students, teachers, staff)
- Enforcement of information **use** and **confidentiality** best practices at local government level
- **Interconnectivity** at nationwide level of the informational systems
Argentina

Ministerio de Educación
Education Management Information System During Emergencies

Husein Abdul-Hamid
Senior Education Specialist
Key Ingredients for Success During Emergencies

**EMIS is the system of reference**
- Populated with crucial identifiers at all levels (institutions, employees, students, parents, ...)
- Populated with multiple dimensions (humans and expertise, cataloged resources, levels of capacity, ...)
- That are well integrated (beyond counts and sums)

**Linked to other internal and external systems**
- Easily customizable and expandable

**Availability of local human capacity** (trained individuals that can use and adjust the system quickly)
High Education Management Information System (HEMIS)

Utkir Khamdamov
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Alisher Abdullayev
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Government of Uzbekistan
Higher Education Management Information System Project

- **Project title**: Modernizing of Higher Education
- **Project subtitle**: Development and implementation of the Higher Education Management Information System in the Higher Education System
- **Project duration**: 2018-2022
- **Project stakeholders**:
  - World Bank
  - Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan
  - Other ministries and state bodies of the Republic of Uzbekistan
  - Higher education institutions of the Republic of Uzbekistan
Higher Education Management Information System

- Higher Education Management Information System development Project for Uzbekistan aims to strengthen higher education system managerial capacity, improve the education quality, labor market relevance and learning environments of higher education institutions.

- The HEMIS is delineated into four main components as follows:
  - Analysis, design and development of Administrative Information Management Subsystem of HEMIS;
  - Analysis, design and development of Academic Information Management Subsystem of HEMIS;
  - Analysis, design and development of Scientific Information Management Subsystem of HEMIS;
  - Analysis, design and development of Financial Information Management Subsystem of HEMIS;

- The HEMIS can provide following services
  - Planning and organization of educational, methodological, scientific and financial activities of the universities;
  - Providing information services to students, teachers and other participants in the high educational process;
  - Organization of an electronic platform for interaction between users of the system, teachers and students
  - Increase ministry’s capacity to respond to regular and ad-hoc education data requests from external parties, by using HEMIS
HEMIS Information System Architecture

- Feed data into the central HEMIS
- Back up for HEIs data
- 80 HEI ICT UNITS
  HEMIS for HEI’s
- CENTRAL HEMIS
  Data warehouse
  HEMIS for Ministry
- FRONT END
- State inspection
  HEMIS for SISQE
- Web based access to
  HEMIS
  (Internet + Intranet)
HEMIS Information System Structure

Integration with other Information Systems

HEMIS portal

AMIS
- Personal
- Student
- Dormitory
- Access Control
- Statistics

RMS
- Projects
- Publications
- Methodical Manuals
- Evaluation
- Library

EMIS
- Admission
- Curriculums
- Course schedule
- Examinations
- Graduation

FMIS
- Tuition Fee
- Scholarships
- Payroll
- Contracts
- Budgeting

Infrastructre
- Network Infrastructure
- Server Infrastructure
- Information Databases

Internal
- Administration
- Professor
- Student

External
- Parents

State bodies

Business
High Education Indicators for HEMIS

ACADEMIC INFORMATION INDICATORS (18)

SCIENTIFIC INFORMATION INDICATORS (13)

ADMINISTRATIVE INFORMATION INDICATORS (30)

FINANCIAL INFORMATION INDICATORS (5)

HEMIS DATA WAREHOUSE
Higher education institutions

- University: 46
- Institute: 38
- Branches: 42
- Academy: 5
Student and Professor Enrollment
Number of programs, Students and Professors

- Programs
  - Bachelor
  - Master
  - PhD

- Students
  - Bachelor
  - Master
  - PhD

- Professors
  - Full, Prof.
  - Full, PhD
  - Full, DSc
HEMIS Data Collection

Number of Data classifiers, Data registers and Data reports

- Data classifiers: 29 administrative, 17 academic, 10 scientific, 4 financial
- Registers: 6 administrative, 4 academic, 10 scientific, 0 financial
- Reports: 31 administrative, 15 academic, 11 scientific, 5 financial
Additional subsystems with COVID pandemic period

- Course content management subsystem for HEMIS
- Student knowledge assessment subsystem for HEMIS
- Online contract registration and generation subsystem for HEMIS
- Graduate School online Application management Information System
- Student Transfer online Application management Information System
Graduate School online Application management Information System

- Online submission of applications
- Application processing
- Document examination
- Exam result processing
- Exam result announcement
Graduate School online Application management Information System

Number of Applicants by regions (77 thous. applicants)
Information system of online application submission for student transfer provides online services:

- Student Registration
- SMS notification of students
- Online Submission of Applications
- Pre-examination of Documents
- Distribution of applications to the commissions
- Examining of Documents by commissions
- Supporting decision-making by commissions
- Announcing results, generating reports and statistics
Student Transfer online Application management Information System

**114**
Higher education institutions use the Information System

**43,516**
Applications were submitted to higher education institutions for student transfer or readmission (12 thous. from foreign universities)

**16**
Ministries and other state bodies commissions were connected to the information system

**40,284**
Applications were examined and accepted by commissions for student transfer and readmission
Integration of HEMIS with other State Information Systems

HEMIS

- Single interactive state services portal
- Single Social Protection Register
- Information system of state organizations (UzASBO)
- Unified National Labor System
- Geoinformation system of Tashkent
Thank you for attention!!!
Session 1.2: Experience sharing, and lessons learned from the COVID-19 crisis:

Global and regional perspective
GPE COUNTRY SUPPORT for DATA SYSTEMS through COVID-19 GRANTS

May 26, 2021

Margaret Irving, Global Partnership for Education Secretariat
Given ongoing uncertainty, **successful recovery depends on strong data systems**

Accurate, timely, reliable, and usable data is necessary for **immediate response**, and to inform **evidence-based planning for preparedness**

**Guide prioritization and identify high return investments** - understand and support the complex and changing needs of learners and their environments

Requires **leveraging existing evidence but also building new approaches** to track learners and understand efficacy of learning interventions

- Many existing **EMIS lack the ability to adapt** to the evolving nature of crises.

Fundamental to ensuring no child is left behind: **conflict-affected, displaced and vulnerable migrant populations** have been disproportionally. Quality, disaggregated data is important to ensure distance learning and the reopening of learning institutions is equitable
GPE leveraged its accelerated funding facility to provide rapid access to financial support for partner countries

- Between April and October 2020, GPE approved $467 million in COVID-19 accelerated grants to 66 countries; 24 of the country grants provided direct support to data-related activities in our partner countries
  - Includes diverse investments in systems resilience, from support for establishment of an instant data collection instrument in Burundi, to support for efforts to build evidence around the efficacy of radio lessons from survey data in Zambia.

- $25 million was disbursed for a global grant to UNESCO, UNICEF and the World Bank focused on global and regional activities that build evidence
  - Support continued learning during the crisis, lay the foundation to mitigate the long-term impact of the pandemic, support back to school preparedness
24 COVID GRANTS CONTAINED DATA COMPONENTS
Data was central to COVID response and for building resilience

- Effectively and efficiently address needs, especially for vulnerable groups
- Track students/teachers and reopening schools
- Aid in the transition out of the pandemic
- Support learning during this pandemic and future emergencies
WHAT FUNDING REQUESTS WERE MADE?

A number of broad categories of funding requests emerged:

- Vulnerable and at-risk populations and/or equity-related data (7 countries)
- Absenteeism/attendance and student rate of return to school (8 countries)
- Learning outcomes (3 countries)
- Accessing distance learning options (3 countries)
- Linking data to targeted support (5 countries)
- Use of technology to gather data (e.g., SMS, tablets, WhatsApp) (4 countries)
- WASH-related data (2 countries)
- Computerization/digitization and/or move to online data monitoring (7 countries)
- Capacity-building and training (5 countries)
ILLUSTRATION OF REQUESTS

1. Bangladesh
2. Kenya
3. Maldives

A caveat: we are only able assess what was funded by GPE and can only speak to planned activities rather than the success and challenges of implementation.
BANGLADESH

Funding Request:

• Track and bring back students to school including at-risk students

Response Plan:

• Track and bring back students to school especially at-risk students and those at-risk of dropping out
• Use remote services for coordination
• Develop a health tracking system
Funding Request:

- Online monitoring system for the school meals program (SMP)
- Collection of weekly statistics to monitor number of students who have reported to school including information on why students are absent (by following up with parents)
- Dissemination of re-enrollment data with targeted campaigns in areas lagging in re-enrollment

Response Plan:

- Regular/reliable data disaggregated by gender, age, disability, and county to guide policy decisions as schools are reopened
- Track attendance and learners’ progress with real-time data
- Strengthen NEMIS to include crisis-relevant info
- Establish school emergency response teams linked to national response mechanisms to protect most vulnerable, esp. girls and those with disabilities
- Promote use of digital data management platforms for COVID 19 response and after
- Build capacity of officers on crisis data management and reporting
Funding Request:

- Strengthen MEMIS through technical support to monitor ERP and provide learning support for students
- Train and equip MEMIS team
- Create video tutorials for MEMIS modules to train schools' focal points
- Identify and correct incorrect data accounts in MEMIS
- Better monitor and track absenteeism and students at risk of dropping out once schools open

Response Plan:

- Register student attendance to Telekilaas and Google Classroom sessions to MEMIS
- Increase staff capacity for MEMIS
- Customize MEMIS for COVID 19, including:
  - Better indicators to track absenteeism and students at risk of dropping out once schools reopen
  - Students who move back to home islands
  - Linked to targeted psychosocial/ counseling support and referral systems
- Strengthen data collection and capacity through MEMIS
- Streamline data collection processes and disaggregate data by gender, SEN, and disability
Integrating hybrid learning in EMIS in the MENA Region
Outline of the presentation

I- Overview of an Integrated Education Sector-wide Management Information System

II- Data gaps emerging from COVID-19
   o Definition and scope of hybrid learning
   o Hybrid learning metrics for consideration for re-imaging the future of EMIS

III- Actions taken to address the data gaps in MENA
   o Regional initial for the development of a framework and toolkit for monitoring remote learning
   o Lessons learned to enhance EMIS in the region
   o Follow-up plan
EMIS Capacity / Maturity Typology in MENA:
1. Basic EMIS Systems
2. Intermediate EMIS Systems
3. Self-sustaining EMIS Systems
II- Gaps emerging from COVID-19: (a) Definition and scope of hybrid learning

1. Teaching and learning model that combines in-person instruction (face to face) and remote learning, in all forms.

2. Remote learning includes High tech, low tech and low-cost solutions—i.e. Online/Offline, TV, Radio, take-home packages.

3. An estimated 40% of enrolled school-age children did not have access to any form of remote learning in MENA (source UNICEF estimates).
II- Data gaps emerging from COVID-19: (b) Hybrid learning metrics for consideration for re-imaging the future of EMIS

- What new indicators will be included in EMIS systems to cover a wide range of drop-out predictors, including non-engagement in hybrid learning, MHPSS risks, protection risks and overall socio-emotional?

- Can LMSs being used for both Formative and Summative assessments?

III- Actions taken to address the data gaps

STRUCTURE OF THE FRAMEWORK AND TOOLKIT FOR MONITORING REMOTE LEARNING IN MENA

**WHO**
are the children reached and not reached or at risk of not being reached by one of a particular form of remote learning

**Where**
are the children not accessing remote learning?—i.e: geographic location

**Why**
are children not reached by any or no form of remote learning delivery modes
Looking at specific groups
Unpack interplay barriers

**What**
are the changes in the children learning gain or loss
Lay the foundation for improving the national capacities to generate critical data needed by countries themselves for their own use and to ready the statistical data collection systems for emerging dataset in dealing with health emergency contexts that require system changes to ensure continued monitoring and evaluation.

**PURPOSE**

1. **Provide guidance** to establish and maintain a set of standard indicators, **operational data collection processes and tools** at country level to generate up-to-date evidence needed **at country level to gauge the effectiveness** and appropriateness of national response and education systems in pandemic or lockdown contexts.

Support interactions and dialogue with Ministry of Education on how MoE can **incorporate monitoring mechanisms** of distance and or remote learning into their existing systems— i.e: integrate formal assessment and statistical modules into their existing national distance learning platforms which can automatically generate key data on coverage, time spent using.
Scope of MENA framework and toolkit

1. **Conceptual framework** to guide the implementation of monitoring process of remote learning and or blended learning towards integration in national M&E systems

2. **Planning, monitoring and evaluating** remote learning implementation operational guide—i.e suggested **set of indicators** to be tracked will be documented

3. **Suggested set of data collection instruments / questions databank**—The toolkit includes a suggested organized set of data collection instruments in adherence with the conceptual framework for targeted audience— MoE, Schools, Teachers, Parents, Students

4. **Guide for sampling design, data analysis plan and data collection options**

5. **Features and characteristics of an effective distance learning system** — From IT and statistics lens, this module will discuss technical capabilities and requirements.
Planned activities and timeline

1. **Finalization of the development of Framework and Toolkit** — June 2021

2. **Dissemination of Framework and Toolkit** at country levels — September 2021

3. **Pilot test of the framework and Toolkit in selected Countries** — Yemen, Sudan, Iran or Morocco by Feb 2022

   - **Capacity building training remote** / country level MoE on the roll out of the Framework and Toolkit to national context in phases approach by June 2022
     
     - **Phase I**: Select countries in ROSA and MENA — Yemen, Sudan, Iran or Morocco
     
     - **Phase II**: in the remaining countries in the two regions and beyond.
CONSULTATIVE AND PARTICIPATORY PROCESS AMONG UN AGENCIES

1. SCOPING
   - Concept note
   - TOR
   - Fundraising

2. CONSULTATION
   - Sharing the idea with key partners—UNICEF, UNESCO, WFP, UNHCR, UNRWA, WB at RO and HQ

3. PARTNERSHIP
   - Building on existing work
     a. ROSA/MENA and HQ
     b. Synergy to avoid duplication
     c. Mapping to interagency frameworks

4. DEVELOPMENT
   - Steering group with key partners
   - Contracting consultant to support the development of the framework and toolkit
Lessons learned to enhance EMIS in the region

- **Absence of institutionalization**: (i) Change in leadership may lead in varied interests and priorities; (ii) Absence of focus on developing standards/mechanisms to institutionalize and operationalize the EMIS; (iii) Critical aspects is often omitted: EMIS-specific policies. A strong legal framework is needed to guide the implementation work and ensure continuity of operations and long-term sustainability.

- **Unclear vision and limited buy-in**: (i) Lack of shared vision on the functionalities of the EMIS; (ii) Limited government support and buy-in;

- **Integration issues**: lack of integration of various information system, Internet access, and availability of ICT equipment.

- **Capacity and coordination issue**: Inadequate funding, procurement issues—i.e. too much focus on the procurement of technology for EMIS development (software, hardware, and equipment) and less on people and processes, lack of coordination between various donors and government.
Thank you.
International Seminar on Re-imagining the future Education Management Information Systems

“Beyond head counts: Leveraging data systems to support inclusive and effective learning for all.”

Silvia Montoya
Director, UNESCO Institute for Statistics (UIS)
Findings of Data Innovation for Producing SDG 4 Indicators: A Global Metadata Analytical Report
Coverage of metadata survey:

- Data recording unit - school, student, teacher
- Data management platform - types of software used
- Data collection mode - paper, electronic, online
- Use of school, student and teacher IDs
- Generating responsibilities of IDs and purpose of using it
- Possibility of retrieval of historical data
- Partnership – involvement of Development partners
### Response of EMIS Typology Questionnaire by region:

<table>
<thead>
<tr>
<th>Regions</th>
<th>Number of Countries in the region</th>
<th>Response of questionnaire by countries</th>
<th>% of countries (Response to questionnaire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>47</td>
<td>32</td>
<td>68</td>
</tr>
<tr>
<td>Arab States</td>
<td>20</td>
<td>13</td>
<td>65</td>
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<tr>
<td>South and West Asia</td>
<td>9</td>
<td>9</td>
<td>100</td>
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<td>Pacific</td>
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<td>Latin America and Caribbean (LAC)</td>
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<td>Central and Eastern Europe</td>
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<td>38</td>
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<tr>
<td>Total</td>
<td>175</td>
<td>103</td>
<td>59</td>
</tr>
</tbody>
</table>
## Data Management Platform by Region (% of countries):

<table>
<thead>
<tr>
<th>Regions</th>
<th>Own developed</th>
<th>StatEduc</th>
<th>Ed Assist</th>
<th>OpenEMIS</th>
<th>Others (e.g. Excel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>63</td>
<td>47</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Arab States</td>
<td>85</td>
<td>8</td>
<td>0</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>South and West Asia</td>
<td>78</td>
<td>0</td>
<td>0</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Central Asia</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>East Asia</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pacific</td>
<td>88</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>83</td>
<td>8</td>
<td>0</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Central and Eastern Europe</td>
<td>100</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>80</td>
<td>18</td>
<td>2</td>
<td>13</td>
<td>5</td>
</tr>
</tbody>
</table>
## Mode of Data Collection (% of countries)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Paper (% of countries)</th>
<th>Standalone electronic mode (% of countries)</th>
<th>Online interface (% of countries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>81</td>
<td>31</td>
<td>19</td>
</tr>
<tr>
<td>Arab States</td>
<td>39</td>
<td>31</td>
<td>46</td>
</tr>
<tr>
<td>South and West Asia</td>
<td>33</td>
<td>22</td>
<td>78</td>
</tr>
<tr>
<td>Central Asia</td>
<td>33</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td>East Asia</td>
<td>67</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Pacific</td>
<td>75</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>42</td>
<td>38</td>
<td>71</td>
</tr>
<tr>
<td>Central and Eastern Europe</td>
<td>0</td>
<td>13</td>
<td>100</td>
</tr>
<tr>
<td>Average</td>
<td>53</td>
<td>36</td>
<td>51</td>
</tr>
</tbody>
</table>
School, teacher and student level data in EMIS (% of countries)
Generation of Student ID by Region (% of countries)

- **Sub-Saharan Africa**: 57% ID generated within MOE, 43% ID generated outside MOE.
- **Arab States**: 29% ID generated within MOE, 71% ID generated outside MOE.
- **South and West Asia**: 67% ID generated within MOE, 33% ID generated outside MOE.
- **Central Asia**: 67% ID generated within MOE, 33% ID generated outside MOE.
- **East Asia**: 75% ID generated within MOE, 25% ID generated outside MOE.
- **Pacific**: 80% ID generated within MOE, 0% ID generated outside MOE.
- **Latin America and Caribbean**: 53% ID generated within MOE, 42% ID generated outside MOE.
- **Central and Eastern Europe**: 40% ID generated within MOE, 0% ID generated outside MOE.
- **Average**: 52% ID generated within MOE, 39% ID generated outside MOE.

Legend:
- Blue: ID generated within MOE (among student ID countries)
- Red: ID generated outside MOE, e.g., National ID (among student ID countries)
Classifications of the countries (in%) based on specific criteria

- Excellent: 43%
- Very Good: 22%
- Good: 32%
- Satisfactory: 3%
Recommendations:

• **Collecting real-time data from schools and beyond:** EMIS is collecting data from schools and not from other sources, it has poses problems to collect students participation on online course in the COVID-19 pandemic;

• **Operationalizing integrated EMIS and individual data:** interlinked with other Management Information System (MIS) systems e. g. Health MIS (HMIS), Teacher Management Information System (TMIS) by using common IDs (national ID number etc) for student and teacher;

• **Enhancing institutional and individual capacity:** allocating adequate resource to collect, compile and publish data / indicators on time;

• **Coordinating investment on EMIS:** Among development partners and within government ministries/department responsible for education on EMIS at the country level;

• **Collaborating to improve knowledge hub of EMIS** ([http://emis.uis.unesco.org/](http://emis.uis.unesco.org/)) including EMIS questionnaires, minimum required features of EMIS software and hardware for developing, using standardize variables for EMIS software, guidelines and minimum standards for EMIS;

• **Upgrading existing EMIS with new technology:** not compatible to one to other, using new technology to collect, compile and disseminate data.
Thank you!

Learn more by visiting: http://tcg.uis.unesco.org/survey-education-covid-school-closures/

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