The 4Ws of Education in Emergencies
Data: Who has What Data? Where Can I Find it? And Why is this so Complicated?
Webinar Housekeeping

Mute your microphone and turn off your video to minimize background noise.

Post questions in the chat area at any time. We’ll respond to as many as possible.

This session is being recorded.

The recording and presentations will be shared on the INEE website – www.inee.org.
Navigating Educational Development Data for EiE

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Agenda

• What is MEERS?
• What is Educational Development Data in EiE context?
• Who has it and Where can I find it?
• What can Educational Development Data be used for?
• Discussion / Q&A
What is MEERS?
Middle East Education Research, Training and Support (MEERS)

• 4-year project funded by USAID’s Middle East Bureau and implemented by Social Impact and FHI 360

• Objective: support continuous data collection, research, training, and analysis related to learners, teachers, education systems, and education outcomes in the Middle East.

• TASK 1: Continuous data collection on education in the crisis contexts of Iraq, Syria and Yemen and associated refugee contexts
MEERS TASK 1 Methodology

1. **EiE Data Mapping**
   - What EiE data is publicly available for the Iraq, Syria and Yemen crises?

2. **Stakeholder Consultations**
   - What data do EiE stakeholders collect, need and use? What are the gaps?

3. **Strategic Meetings**
   - Who is doing what to address EiE data issues and challenges?

4. **New Directions?**
   - What can be done to support improved accessibility, quality and navigability of EiE data?
What is Educational Development Data?
Educational Development vs. Humanitarian Data

- What are differences and similarities between educational development and humanitarian education data?

### Educational Development Data
- Infrequent (annual)
- Relatively stable reference population
- Focus on overall education system
- Clear understanding of what data coverage, reliability, quality mean

### Humanitarian Education Data
- Frequent (weekly, monthly)
- No stable reference population
- Focus on education services provided, usually outside the system
- Lack of clear understanding of what data coverage, reliability, and quality mean

- Populations, including refugees and IDPs
- Need for similar information and indicators
Educational Development Data Overview

• **What is it?**
  – Educational development data provides information about the capacity of education systems
  – Key education indicators:
    • *Educational resources*: schools, teachers, education expenditure
    • *School access, retention and completion*: enrollment, attendance, intake, repetition, dropout, attainment
    • *Learning outcomes and literacy*: reading/math scores, literacy rates

• **Why is educational development data relevant to EiE?**
  – To understand education system capacity
  – To examine how emergencies impact education trends
  – To identify gaps and inform planning for resource allocation
  – Informs education policies and decision-making
The Education Data Ecosystem: Development Data

Primary Data Sources
- Countries EMIS: Administrative data from the monitoring and management of national education system (enrolment, teachers, Finance etc.)
- ILSAs
- CLAs
- HH Surveys: Household-based data collection, often include education data as background variable. Might include learning data.

Primary International Data Sources
- ISCED, International methodologies, countries validation

Secondary International Data Sources
- World Inequality Database on Education
- United Nations Educational, Scientific, and Cultural Organization
- OECD.Stat
- APIs, Inter-Agencies collaboration, scraping and curating

http://data.uis.unesco.org/
https://stats.oecd.org
https://population.un.org/wpp/
http://datatopics.worldbank.org/education/
https://www.education-inequalities.org/
https://www.epdc.org/

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# The Education Data Ecosystem: Development Data Availability

<table>
<thead>
<tr>
<th>Education Phase</th>
<th>Enrolment</th>
<th>Graduates</th>
<th>Teachers' count</th>
<th>Teachers' training</th>
<th>Government expenditure</th>
<th>Household expenditure</th>
<th>Learning outcomes/skills assessment</th>
<th>Other sample surveys</th>
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<tbody>
<tr>
<td>Early childhood care and education</td>
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<td>N/A</td>
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<td>Primary education</td>
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<td>General secondary education</td>
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<td>Formal TVET</td>
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<td>Non-formal TVET</td>
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<td>Formal adult education</td>
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<td>Non-formal adult education</td>
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<td>Tertiary education</td>
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**Legend:**
- **Green**: Data exist, usable, well defined, accessible and with very good coverage
- **Light Green**: Data exist, usable, well defined, accessible and with good coverage
- **Yellow**: Data exist, usable, well defined but would need extra efforts to compile nationally and report internationally
- **Red**: Some data exist but with limited coverage/quality/usability
- **Orange**: No data/problematic data/require major developments and resources

**Source:** UNESCO Institute for Statistics
Who has Educational Development Data and Where can I find it?
# Educational Development Data: Who has it and Where can I find it?

<table>
<thead>
<tr>
<th>Source &amp; Link</th>
<th>Source Description</th>
<th>Scale &amp; Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNESCO Institute for Statistics (UIS) <a href="http://data.uis.unesco.org/">http://data.uis.unesco.org/</a></td>
<td>UIS has an online database called UIS.Stat that contains international education data, UIS also presents SDG4 data</td>
<td>• National • 1970-2018 (~3x per year)</td>
</tr>
<tr>
<td>Education Policy and Data Center (EPDC) <a href="https://www.epdc.org/">https://www.epdc.org/</a></td>
<td>EPDC has an online database that contains international education data</td>
<td>• National and subnational • 1955-2018 (~annual)</td>
</tr>
<tr>
<td><strong>National Education Management Information Systems (EMIS)</strong> <a href="https://jmoe.openemis.org/data/generaloverview/index.html">https://jmoe.openemis.org/data/generaloverview/index.html</a></td>
<td>National EMIS contain administrative data on education systems.</td>
<td>• National and subnational • Dates are country-dependent (~annual)</td>
</tr>
<tr>
<td>(International) Large-Scale Assessments (ILSAs etc) <a href="https://nces.ed.gov/surveys/international/ide/">https://nces.ed.gov/surveys/international/ide/</a></td>
<td>The OECD, IEA and national governments conduct periodic, nationally representative assessments of learner and adult competencies. These can be accessed in one place at NCES.</td>
<td>• National (with some exceptions) • 1995-2019 (~ea. 3 to 5 years for ILSAs)</td>
</tr>
<tr>
<td>Other UN Data Sources (<a href="https://www.humandevelopmentindex.org/">HDI</a>, <a href="https://www.ilo.org/">ILO</a>)</td>
<td>The Human Development Index provides data on years of schooling at national and subnational levels. The ILO's statistics office collects data on youth NEET rates and child labor at the national level.</td>
<td>• National (both) and subnational (HDI) • 1990-2019 (HDI, ~annual) and 2000-2019 (ILO NEET ~irregular)</td>
</tr>
</tbody>
</table>
Data Source Overview: UNESCO Institute for Statistics (UIS)


- A browser for viewing and downloading the most popular UIS data and indicators in tables.
  - Administrative data, household surveys, learning assessments, population censuses, school-based surveys, government financial data
- Users can build their own customized tables and export data in Excel format.
- **Pros**: Broad, wide-ranging dataset; comparable by country; can be exported into Excel
- **Cons**: Difficult to navigate; disaggregated only by sex and school level; no visualization

Source: [Technical Cooperation Group on the Indicators for SDG 4](https://www.un.org/sdg/indicators/)

- A platform to view the indicators used for monitoring the Education 2030 targets
- **Pros**: Good for visuals and more user friendly; Grouped by SDGs; Equality disaggregations + visuals
- **Cons**: Limited indicators

Illustrative Indicators + Data Types

- **School access, retention and completion**: Intake, enrollment, repetition, dropout, completion, survival, transition, OOSC, pupils, attendance
- **Educational resources**: Schools, teachers, pupils, pupil-teacher ratio, trained teachers as a % of all, public expenditure per pupil
- **Literacy and learning outcomes**: Learning achievement in reading, math or science; literacy rate
Navigating UNESCO Institute for Statistics (UIS) Data

Navigating UNESCO Institute for Statistics (UIS) Data

**Activity 1:** Use UIS ([data.uis.unesco.org](http://data.uis.unesco.org)) to find the number of out-of-school children of primary school age in Lebanon in 2017.
Educational Development Data: World Bank Education Statistics (EdStats)


- World Bank’s online database that holds around 2,500 internationally comparable education indicators covering the education cycle from pre-primary to tertiary education
  - Administrative data from UIS; international learning assessments (PISA, TIMSS, PIRLS, PIAAC, and EGRA) and regional learning assessments (SACMEQ, PASEC, LLECE); World Bank databases, equity data from household surveys such as LSMS, DHS, MICS, and projection data to 2050.

- Resources:
  - Country at a Glance provides a snapshot of country data on key topics in education such as access, completion, learning, expenditures, policy, and equity.
  - EdStats DataBank is an analysis and visualization tool that contains time series data where you can create your own queries; generate tables, charts, and maps; and save, embed, and share them

- Pros: Easier to use database with equity disaggregations by gender, wealth quintile, urban / rural; visualization options: chart, map, strong country profiles

- Cons: Mainly secondary data, primarily pulls from other data sources; somewhat difficult to navigate because they offer more disaggregation options

Illustrative Indicators + Data Types
- **School access, retention and completion:** Intake, enrollment, repetition, dropout, attainment, OOSC, mean years of schooling
- **Educational resources:** Schools, teachers, pupils, pupil-teacher ratio, trained teachers, staff compensation, government expenditure
- **Literacy and learning outcomes:** Learning achievement in reading, math or science, literacy rate

Navigating World Bank Education Statistics (EdStats)

Educational Development Data: Education Policy and Data Center (EPDC)

**Source:** EPDC Database: [https://www.epdc.org/](https://www.epdc.org/)

- The EPDC database contains a wealth of data on key education indicators
- Although users may find some information on nearly any country in the world in the EPDC database, the largest collections of data are for low-income, low-middle-income, and to some extent, upper-middle-income countries

**Resources**
- Country landing pages: [https://www.epdc.org/country](https://www.epdc.org/country)
- National Education Profiles: [https://www.epdc.org/tags/national-education-profiles](https://www.epdc.org/tags/national-education-profiles)

**Pros:** National and *subnational* levels, includes wide variety of data sources, disaggregated by equity dimensions

**Cons:** Limited data manipulation options for visualizations

**Illustrative Indicators + Data Types**
- **School access, retention and completion:** Intake, enrollment, repetition, dropout, completion, survival, transition, attainment, OOSC, pupils, mean years of schooling
- **Educational resources:** # of schools, teachers & pupils, pupil-teacher ratio, trained teachers as a % of all, education expenditure
- **Literacy and learning outcomes:** Learning achievement in reading, math or science; literacy rate
Educational Development Data: National Education Management Information Systems (EMIS)

**EMIS Information:** (Source: country specific)

- Some EMIS allow public access, other EMIS do not, while other EMIS are non-functional.
- Resources:
  - World Bank lessons learned strengthening EMIS (2017)
  - UNESCO working paper on an inclusive approach to EMIS (2018)
  - Other resources
- **Pros:** Primary data, potential for high level of detail.
- **Cons:** EMIS quality varies, difficult to access, and can be difficult to compare countries

**Illustrative Indicators + Data Types**

- **School access, retention and completion:** Intake, enrollment, repetition, dropout, completion, survival, transition, OOSC, pupils, attendance
- **Educational resources:** Schools, classrooms, teachers, pupils, trained teachers, non-teacher staff, staff attrition, public expenditure, classroom resources (desks, textbooks, ICT labs)
- **Literacy and learning outcomes:** Examination results, graduation rates, and average grades

**OpenEMIS Example:** Jordan ([Source](#))

- **OpenEMIS** initiative supported by UNESCO and GPE
- **Jordan's openEMIS** provides public access to aggregate data
- Resources
  - Evaluation report of the creation of Jordan's openEMIS
- **Pros:** Open access, direct data source, multiple indicators
- **Cons:** Limited data navigation and analysis ability (in open mode)
Navigating OpenEMIS (Jordan Example)

**Activity 3:** Use OpenEMIS ([https://jomoe.openemis.org/data/generaloverview/index.html](https://jomoe.openemis.org/data/generaloverview/index.html)) to determine the percentage of second-shift schools "Enabling Schools". What percentage of girls are in second shift schools? What about staff attrition rates?
Educational Development Data: Assessments

Source: NCES ILSAs International Data Explorer (https://nces.ed.gov/surveys/international/ide/)

- Data explorer website that allows access to the major international large-scale assessments (ILSAs) in one location. ILSAs included:
  - OECD's PISA: reading, math, science, problem solving, financial literacy (15 yo); IEA's PIRLS: reading (4th graders); IEA's TIMSS: math & science (4th- and 8th-grade); advanced (end secondary); OECD's PIAAC: literacy, numeracy, problem solving (adults 16-65); OECD's TALIS: teachers, teaching, & learning environments (teachers & principals). All except TALIS also available on EdStats.

- Pros: Representative data on key learning competencies, basic analysis

- Cons: Low frequency (every few years) data collection lacking coverage for many countries affected by conflict (more data from refugee host countries than from conflict countries), slow website

Note: Countries also conduct national level assessments besides ILSAs which can be found in their EMIS system and reported through UIS's SDG 4.1.2 data collection

- UIS allows visualization of the existence of a nationally representative learning assessment for reading and math at three stages of schooling: grade 2 or 3; the end of primary education; and the end of secondary
Navigating International and National Assessments using NCES and UIS

**Activity 4: Use NCES (https://nces.ed.gov/surveys/international/ide/) to determine the trend in reading performance of 4th graders in Iran between 2001 and 2016. Which year had the lowest performance?**
Educational Development Data: Other UN Data Sources

Source: ILOStat (https://ilostat.ilo.org/)
- International source for labor statistics collected from member countries.
- Pros: Primary data with quality controls, easy to analyze data including through customized applications
- Cons: Website can be challenging to navigate, missing trend data for the relevant indicators, education indicators are less frequent

Illustrative Indicators + Data Types
- School access, retention and completion: youth not in employment education or training (NEET), child labor
- Educational resources: Labor-force participation rates and unemployment rates by sector
- Learning and other outcomes: Employment rates by educational level, occupational earnings data and gender pay gaps

Source: SHDI (https://globaldatalab.org/shdi/)
- Subnational Human Development Index curated by Radboud University
- Pros: Provides subnational trend series data, provides files for mapping data (shape files)
- Cons: Simple data explorer, data must be downloaded for analysis
What can Educational Development Data be used for in EiE?
What can Educational Development Data be used for in EiE?

What can Educational Development Data be used for?

- To understand the capacity of an education system (mainly pre-conflict)
- To examine how emergencies impact education trends
- To identify education system needs and gaps
- To inform education policy and decision-making

Key Indicators

- Educational resources
- School access, retention, completion
- Learning outcomes

Educational Development Data Sources

- UIS.Stat
- EdStats
- EPDC
- EMIS
- (I)LSAs
- Other UN
- Subnational data

Other UN
Discussion
Discussion Questions

• What are differences in using these databases?

• How can you use this data in your own work?

• How can these data be used in humanitarian education work?

• What are limitations to these sources?
Q&A

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