# 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.

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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

IRAQ

SYRIA

YEMEN

# MEERS TASK 1 Methodology

**EiE Data Mapping**

**Stakeholder Consultations**

**Strategic Meetings**

**New Directions?**

What EiE data is publicly available for the Iraq, Syria and Yemen crises?

What data do EiE stakeholders collect, need and use? What are the gaps?
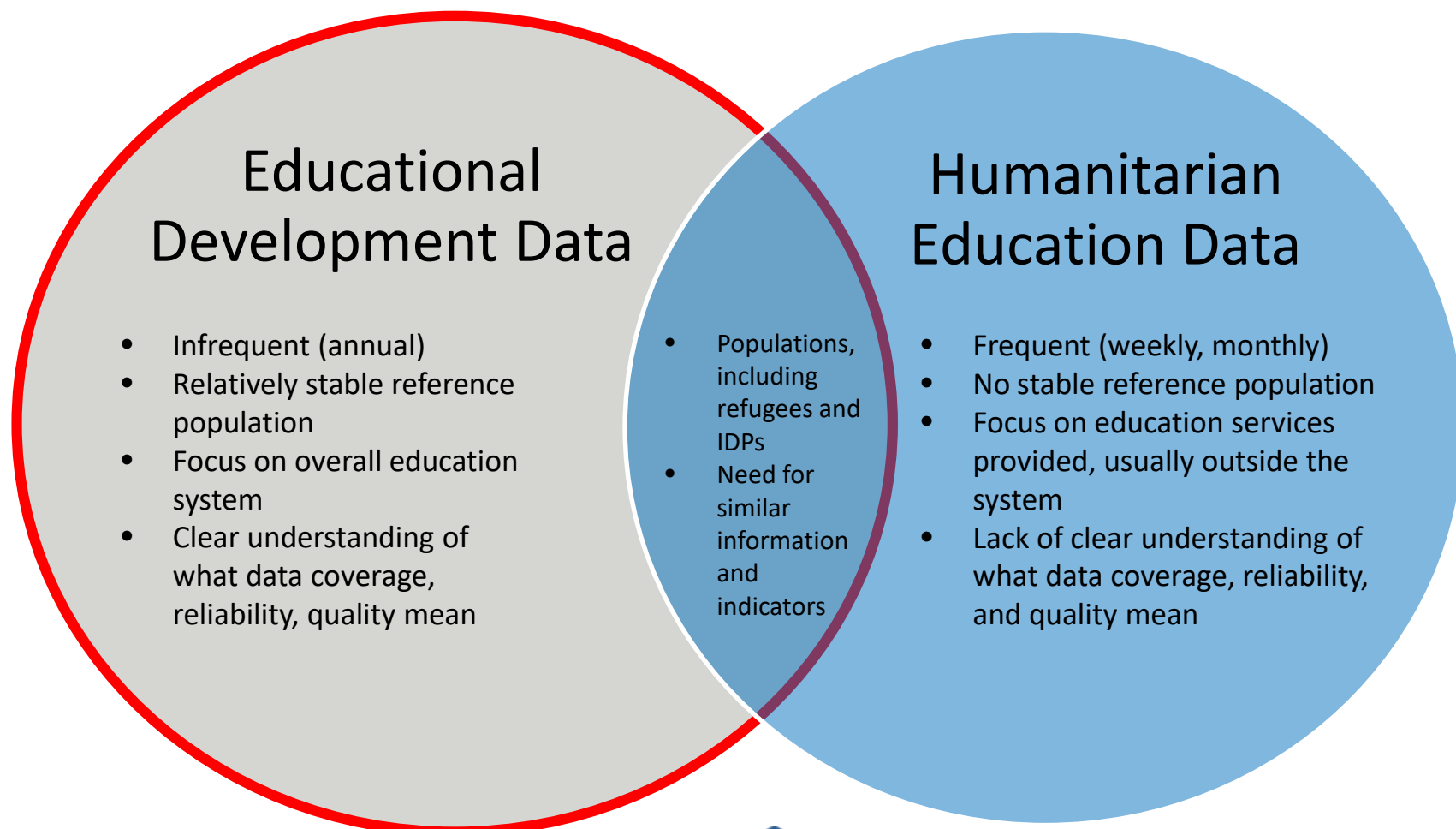
Who is doing what to address EiE data issues and challenges?

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

**Populations, including refugees and IDPs**
- Need for similar information and indicators

**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

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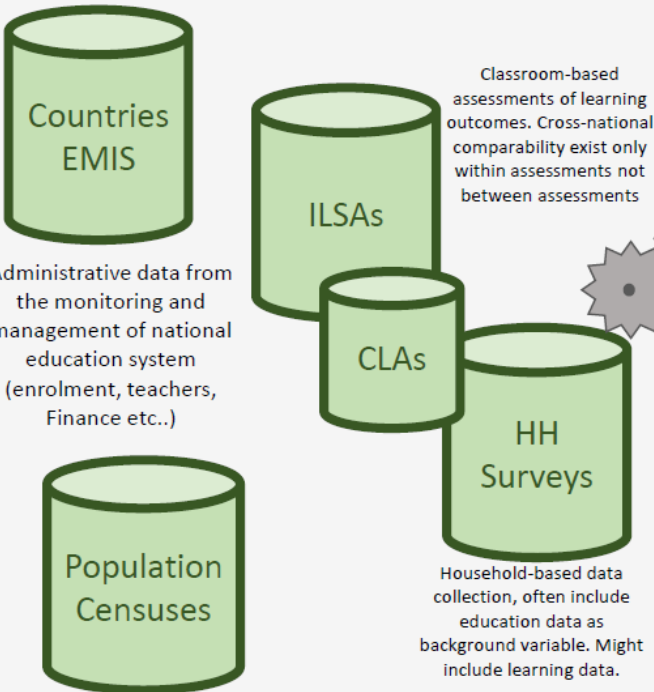Inter-agency Network for Education in Emergencies

# 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

NORRAG
Network for international policies and cooperation in education and training
Réseau sur les politiques et la coopération internationales en éducation et en formation

## Primary Data Sources

**Countries EMIS**

Administrative data from the monitoring and management of national education system (enrolment, teachers, Finance etc..)

**ILSAs**

**CLAs**

Classroom-based assessments of learning outcomes. Cross-national comparability exist only within assessments not between assessments

**HH Surveys**

Household-based data collection, often include education data as background variable. Might include learning data.

**Population Censuses**

« Exaustive » household-based data collection, initially include education data as background variable

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## Primary International Data Sources

ISCED, International methodologies, countries validation

UNESCO INSTITUTE FOR STATISTICS

United Nations Educational, Scientific and Cultural Organization

UNITED NATIONS DESA / POPULATION DIVISION

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT — OECD.Stat

APIs, Inter-Agencies collaboration, scraping and curating

http://data.uis.unesco.org/
https://stats.oecd.org
https://population.un.org/wpp/

## Secondary International Data sources

World Inequality Database on Education

THE WORLD BANK
Education Statistics (EdStats)

fhi360 EDUCATION
Access to school

http://datatopics.worldbank.org/education/
https://www.education-inequalities.org/
https://en.unesco.org/gem-report/statistics
https://www.epdc.org/

# The Education Data Ecosystem: Development Data Availability

| | Collected by UIS (for approximately 150 countries) and jointly by UIS/OECD/Eurostat (for approximately 60 countries) | | | | | Collected by: World Bank (LSMS) | Collected by OECD (PISA, PIAAC), World Bank (STEP), CONFEMEN (PASEC), LLECE (SERCE and TERCE) | Collected by: UNICEF (MICS), ICF (DHS), Eurostat (CVTS, AES) |
|---|---|---|---|---|---|---|---|---|
| | **Enrolment** | **Graduates** | **Teachers' count** | **Teachers' training** | **Government expenditure** | **Household expenditure** | **Learning outcomes/skills assessment** | **Other sample surveys** |
| **Early childhood care and education** | 🟩 | N/A | 🟩 | 🟩 | 🟨 | 🟧 | 🟥 | 🟧 |
| **Primary education** | 🟩 | 🟩 | 🟩 | 🟩 | 🟨 | 🟧 | 🟧 | 🟧 |
| **General secondary education** | 🟩 | 🟩 | 🟩 | 🟨 | 🟨 | 🟧 | 🟧 | 🟧 |
| **Formal TVET** | 🟩 | 🟩 | 🟨 | 🟨 | 🟧 | 🟥 | 🟥 | 🟧 |
| **Non-formal TVET** | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟧 |
| **Formal adult education** | 🟩 | 🟧 | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟧 |
| **Non-formal adult education** | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟥 | 🟧 |
| **Tertiary education** | 🟩 | 🟩 | 🟩 | 🟥 | 🟨 | 🟧 | 🟥 | 🟧 |

🟩 Data exist, usable, well defined, accessible and with very good coverage
🟩 Data exist, usable, well defined, accessible and with good coverage
🟨 Data exist, usable, well defined but would need extra efforts to compile nationally and report internationally
🟧 Some data exist but with limited coverage/quality/usability
🟥 No data/problematic data/require major developments and resources

*Source: UNESCO Institute for Statistics*

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# Who has Educational Development Data and Where can I find it?

# Educational Development Data:
# Who has it and Where can I find it?

| Source & Link | Source Description | Scale & Frequency |
|---|---|---|
| **UNESCO Institute for Statistics (UIS)** http://data.uis.unesco.org/ | UIS has an online database called UIS.Stat that contains international education data, UIS also presents SDG4 data | • National • 1970-2018 (~3x per year) |
| **World Bank Education Statistics (EdStats)** http://datatopics.worldbank.org/education/ | The World Bank has an online database called EdStats that contains international education data | • National • 1970-2018 (~annual) |
| **Education Policy and Data Center (EPDC)** https://www.epdc.org/ | EPDC has an online database that contains international education data | • National and subnational • 1955-2018 (~annual) |
| ***National Education Management Information Systems (EMIS)*** Jordan: https://jo-moe.openemis.org/data/generaloverview/index.html | National EMIS contain administrative data on education systems. | • National and subnational • Dates are country-dependent (~annual) |
| **(International) Large-Scale Assessments (ILSAs etc)** https://nces.ed.gov/surveys/international/ide/ | 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. | • National (with some exceptions) • 1995-2019 (~ea. 3 to 5 years for ILSAs) |
| **Other UN Data Sources (HDI, ILO)** | 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. | • National (both) and subnational (HDI) • 1990-2019 (HDI, ~annual) and 2000-2019 (ILO NEET ~irregular) |

# Data Source Overview: UNESCO Institute for Statistics (UIS)

**Source**: UIS Data Center: http://data.uis.unesco.org/

- 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

- 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

Illustrative Indicators + Data Types

✓ **School access, retention and completion:** Gross intake ratio, completion, OOSC

✓ **Literacy and learning outcomes**: Learning achievement in reading and math

# Navigating UNESCO Institute for Statistics (UIS) Data

***TCG's SDG4 indicators platform:*** (http://tcg.uis.unesco.org/4-1-2-administration-of-a-nationally-representative-learning-assessment/)

# Navigating UNESCO Institute for Statistics (UIS) Data

*Activity 1:* Use UIS (**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)

**Source**: World Bank EdStats: http://datatopics.worldbank.org/education

- 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)

***Activity 2:*** Use the map function of the EdStats Databank (https://databank.worldbank.org/source/education-statistics-%5e-all-indicators) to find the region with a concentration of low adjusted net enrolment rates for upper secondary in 2017
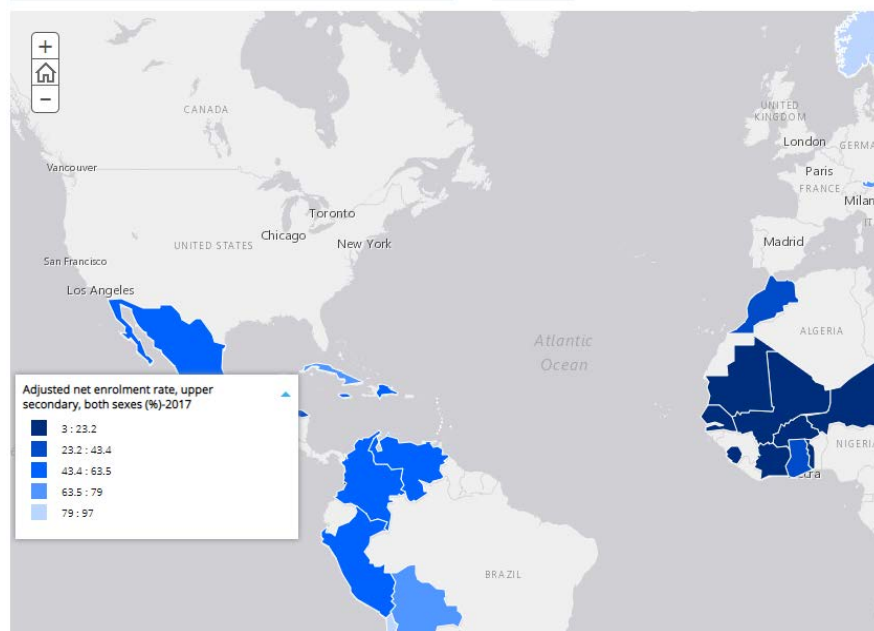
# Educational Development Data: Education Policy and Data Center (EPDC)

**Source**: EPDC Database: 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
  - 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

**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)

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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

# Navigating OpenEMIS (Jordan Example)

***Activity 3: Use OpenEMIS*** (**https://jo-moe.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?
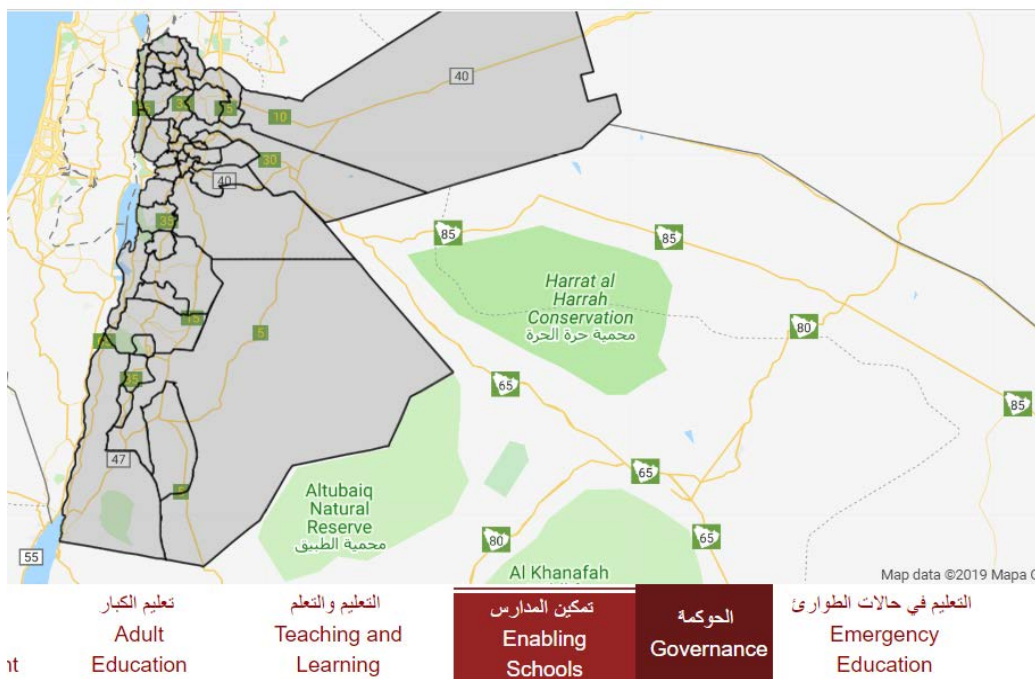
# Educational Development Data: Assessments

**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

Illustrative Indicators + Data Types

✓ **School access, retention and completion:** enrollment, attendance

✓ **Educational resources:** school resources, teacher training, instructional time

✓ **Learning and other outcomes**: children: reading, math, science, and problem solving; adults: training, skill use, occupational attainment

Illustrative Indicators + Data Types

✓ **Learning and other outcomes**: reading and mathematics

# 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?*
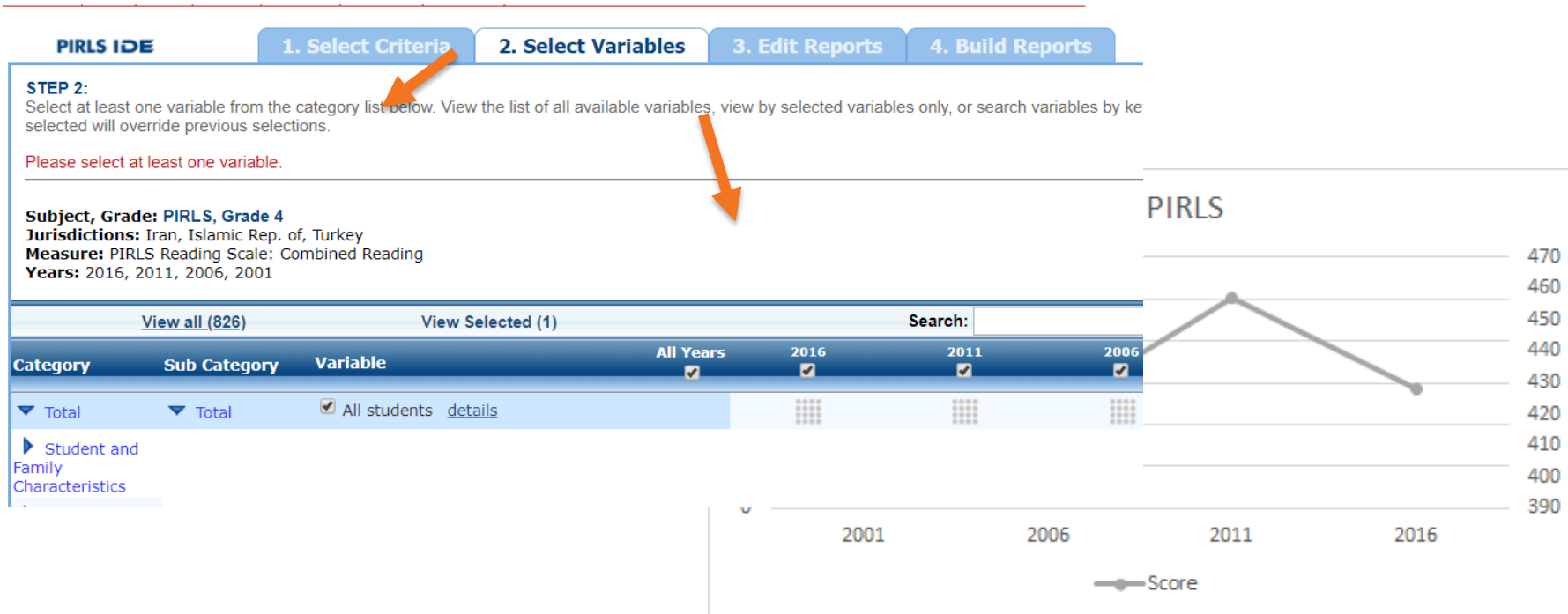
# Educational Development Data:
# Other UN Data Sources

**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

Illustrative Indicators + Data Types

✓ **School access, retention and completion:** expected years of schooling, mean years of schooling

# What can Educational Development Data be used for in EiE?

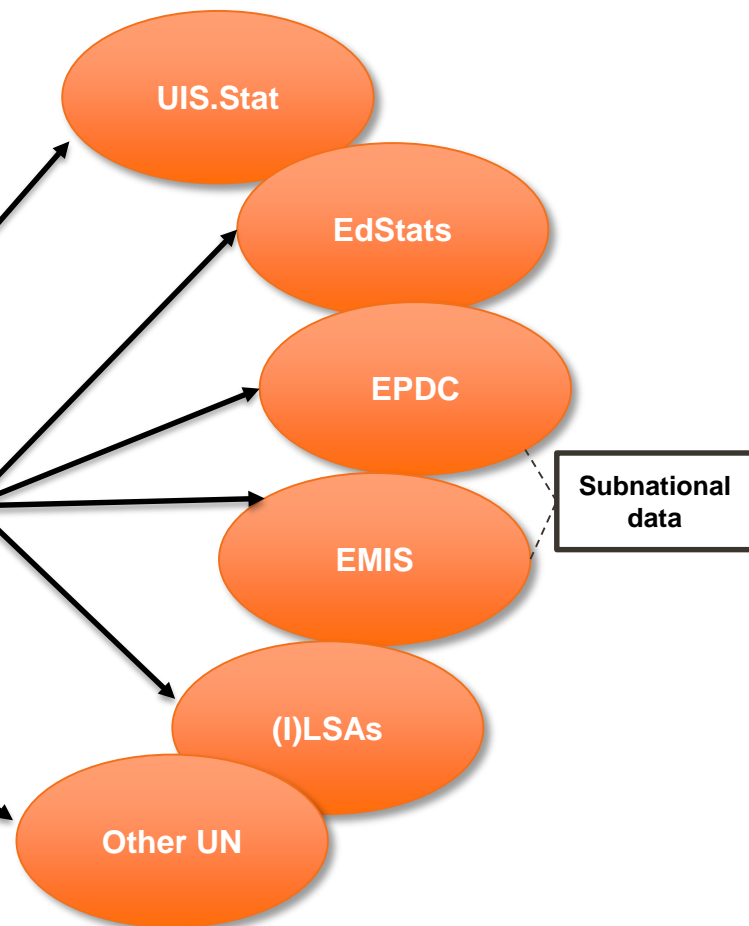# What can Educational Development Data be used for in EiE?

**What can Educational Development Data be used for?**

**Key Indicators**

**Educational Development Data Sources**

# 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

## For more information, contact:

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