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Institute for Statistics



EXECUTIVE SUMMARY

2024

2024 CONFERENCE ON
**EDUCATION DATA
AND STATISTICS**

The UNESCO Conference on Education Data and Statistics (EDS Conference) marked a significant moment: it was the first of its kind in the field of education and filled a crucial void in the global education statistics landscape. The Conference provided an inclusive, open, transparent and expert forum for monitoring, advising, and steering the international community's efforts to develop methodologies, standards and indicators. All these are key to achieving the goals of SDG 4 and setting future international education agendas.

The first session of the Conference was organized by the UNESCO Institute for Statistics (UIS), from 7 to 9 February 2024 in UNESCO headquarters in Paris, in collaboration with the Global Education Monitoring Report (GEMR). It had the following objectives:

- to establish an international community of practice of education statisticians guiding the Technical Cooperation Group on SDG 4 indicators (TCG).
- to communicate, discuss and reach consensus on concepts, definitions, methodologies and operational aspects of indicator measurement in the form of recommendations and guidelines for adoption as international standards.
- to debate the impact of technological developments on education statistics and ways in which the community of education statisticians can benefit from mutual opportunities and to address challenges together¹.

DEVELOPMENT OF THE EDS CONFERENCE

Outlined below are the main steps taken in preparation for the Conference:

- The EDS Conference was approved during the 9th meeting of the Technical Cooperation Group on SDG 4 indicators (TCG) ([December 2022](#)).
- The decision was shared with the UNESCO Executive Board during its 217th session (October 2023).
- In early 2023, the UIS launched the process of writing position papers and background papers for the Conference. Themes included ISCED, administrative data, teachers, education expenditure data, learning assessments and skills, household surveys and benchmarks. The papers all had the same structure which includes the background, challenges, potential solutions and a forward agenda.

¹ More information about the Conference and relevant documents in English, French and Spanish are on the website: <https://ces.uis.unesco.org/>

- The UIS held six regional consultations in the Pacific, the Arab States, Asia, Latin America and the Caribbean, Africa, North America and Europe (October-November 2023). Their purpose was to discuss the position papers with key stakeholders from Member States, mainly statisticians, and to identify the regional priorities that would be presented to the Conference.
- The UIS held the annual [expert and technical meetings](#) of the Global Alliance to Monitor Learning (GAML) and the TCG (December 2023) in preparation for the Conference. An additional [meeting](#) of TCG members was held one day prior to the Conference.
- Other meetings included a global Member States webinar (October 2023), a briefing (ED talk) for UNESCO colleagues, and a second global webinar (both in December 2023).

To mark the Conference, four major monitoring tools were developed, and they address three overarching themes of the Conference:

The need for data ecosystems

1. **[Data for education](#)**: a set of products, including a [report](#), an [infographic](#), a short [video](#) and a [presentation](#) which can guide policymakers to understand what data sources are available and the importance of producing high quality data for effective policy planning.

Increasing statistical capacity to produce data

2. **[LASER](#)** (Learning, Administrative data, Surveys, Expenditure, Review and monitor progress): a tool that helps assess whether a country's education data ecosystem is collecting and using effectively the variety of data sources required for policymaking and the overall governance of the education sector.
3. **[AMPL](#)** (Assessments for Minimum Proficiency Levels): tools to produce internationally comparable learning data to report on the global indicator SDG 4.1.1.

Measuring progress and data use

4. **[SDG 4 scorecard](#)**: a progress report on national SDG 4 benchmarks with a focus on teachers, prepared in collaboration with the Global Education Monitoring (GEM) Report.

PROCEEDINGS OF THE EDS CONFERENCE (7-9 FEBRUARY 2024)

The first session of the EDS Conference gathered a broad spectrum of experts and stakeholders: national statisticians; high-ranking officials from ministries of education including ministers and deputy ministers for planning; heads of statistics departments; heads of learning assessment agencies; representatives of national statistical offices; and representatives of international organizations.

Engagement day (6 February 2024)

The Conference was preceded by an [engagement day](#) on “Data-Driven Approaches to Lifelong Learning” which included eight sessions on topics ranging from education in emergencies to disability. The key messages and takeaways were presented to the Conference and summarized in a synthesis [report](#).

Day 1

The Conference was opened by Ms. Stefania Giannini, Assistant Director-General for Education at UNESCO and Ms. Silvia Montoya, director of the UNESCO Institute for Statistics, with a keynote address by Professor James Heckman. The session also included a high-level panel of education experts and policymakers; the official launching of the Conference; a session on TCG; an information session on ISCED; and three sessions on administrative data and teacher and education expenditure data.

- In her opening remarks, Ms. Giannini emphasized the importance of the EDS Conference, the pivotal role of data in advancing global education objectives, the link between data and policymaking, the concept of a “data culture” and the future of data in education.
- Ms. Montoya focused on the central role of the Conference in improving education data collection and analysis, the importance of fostering dialogue among Member States and different stakeholders, the role of the UIS in developing technical standards, the articulation between the TCG and the Conference, and challenges and innovations in the EDS field.
- Professor Heckman, Nobel Laureate, Professor of Economics and Director of the Center for the Economics of Human Development, emphasized the crucial role of education in societal development and global prosperity. He highlighted the complexity of education systems and the importance of leveraging data and discussed interdisciplinary approaches to promote equitable access to quality education through individual and societal development.
- The comments of the high-level panel of experts and policymakers reflected the multifaceted challenges and opportunities latent in harnessing data for educational improvement. The panel

collectively addressed the spectrum of challenges from the importance of early education to the transformative potential of technology in education data management.

- Professor Dankert Vedeler, First Vice-Chair of the UIS Governing Board, officially launched the Conference, highlighting it as an important milestone and emphasizing the importance of robust data for policymaking. He encouraged methodologies based on emerging technologies to strengthen capacity-building. In a more administrative capacity, he presented the rules of procedure of the EDS Conference and proposed the election of Ms. Magda Tomasini, Director at the Directorate of Evaluation, Foresight and Performance at the Ministry of National Education of France, as the Chairperson of the Conference.
- Unanimously elected, Ms. Tomasini invited the election of officers for the Conference Bureau. She stressed the importance of high-quality reliable data and its ready accessibility.
- Ms. Montoya presented the draft agenda and programme of work which were unanimously adopted. The following TCG session provided an overview of the group's activities and the progress made in enhancing the global education indicator framework. The rotation process of its members for 2024-2026 was also presented.
- Ms. Montoya led the information session on ISCED, providing a critical platform for discussing the challenges and advancements associated with this comprehensive framework. ISCED is the cornerstone for global education statistics, enabling worldwide comparisons and in-depth analysis.
- Mr. Alpha Bah, vice-chair of the Conference and head of EMIS and ICT units, Directorate of the Ministry of Education of the Gambia, outlined the critical role of administrative data in education monitoring and addressed its main challenges (quality of data, quantity of data and biases) and key UIS developments (dynamic templates and hybrid strategy for use of population data), introducing the [LASER](#) tool.
- Mr. Manos Antoninis, director of the Global Education Monitoring Report, focused on teacher-related indicators in SDG 4. Challenges include data coverage associated with monitoring teacher qualifications, training and compensation. He called for new policy indicators to attract, retain and monitor teachers effectively.
- Ms. Montoya presented the challenges related to education expenditure indicators, including low coverage for some indicators, conflicting data sources, and the measurement of private expenditures.

Day 2

Day 2 of the Conference included keynote addresses by Dr. Rukmini Banerji and Dr. Benjamin Piper and Ms. Epha Ngota. The sessions discussed learning assessments and skill surveys, household survey data, national SDG 4 benchmarks and the integration of statistics.

- Dr. Banerji, Chief Executive Officer of Pratham Education Foundation, focused on the Annual Status of Education Report (ASER) initiative to measure learning achievement to make educational outcomes comprehensible to parents and communities. Both data-driven approaches and community engagement are essential in understanding and addressing educational challenges.
- Dr. Piper, Director of Global Education Program, Bill & Melinda Gates Foundation, highlighted the importance of measuring learning outcomes early and comparably. He called for prioritizing measurement of basic literacy and numeracy as a critical indicator for educational progress.
- Ms. Ngota, Assistant Director, National Examination Council in Kenya, illustrated the importance of integrating learning assessments to bolster educational outcomes and guide policy-making processes. Overcoming financial and logistical obstacles remains critical for the successful execution of strategies to enhance learning outcomes.
- Ms. Montoya led the session on learning assessments and skill surveys, presenting the challenges of coverage gaps, variability in data collection, issues of quality and standardization. There is a pathway forward to achieving more accurate, comprehensive, and comparable education data, which is pivotal for informing policy decisions and meeting global educational objectives such as global standards and harmonization, the Rosetta Stone tool and capacity development tools.
- Ms. Betina Fresneda, vice-chair of the Bureau of the Conference and a representative from IBGE Brazil, outlined the role of household surveys in monitoring SDG 4, presenting their benefits and challenges, and proposing strategic solutions for using them to collect education-related data effectively.
- Ms. Montoya described the use of national SDG 4 benchmarks, focusing on benchmark indicators, their coverage and the challenges which directly impact the ability to measure improvements in education and to identify areas requiring more focused interventions. She proposed a multi-faceted approach which would ensure that the benchmarking process remains relevant and ready to address today's challenges in education.
- Mr. Antoninis focused on the main challenge associated with integration of statistics – the need to harmonize different data sources. He proposed strategies for integrating data to produce reliable SDG 4 indicators, such as developing models for integration, ensuring active engagement of countries

and formalizing data reporting practices. Country ownership of education data is essential for successful data collection and analysis.

Day 3

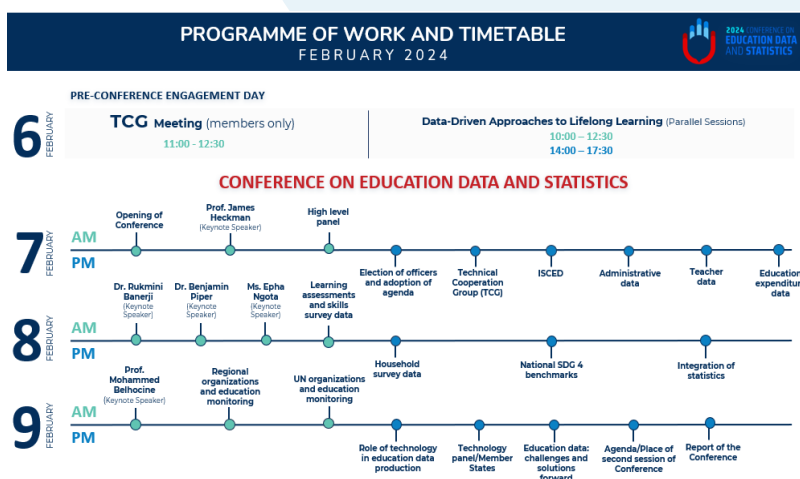
Day 3 included a keynote address by H.E. Professor Mohammed Belhocine representing the African Union, which had declared 2024 to be the Year of Education for Africa. Panels on education monitoring and the role of technology in education data production revealed the challenges facing education and solutions forward were summarized. A provisional agenda and place of the second session of the EDS Conference were proposed. The Rapporteur, Mr. Luis Crouch, presented his conclusions and statements by Ms. Giannini and Ms. Montoya brought this first EDS Conference to an end.

- H.E. Professor Mohammed Belhocine, Commissioner for Education, Science, Technology, and Innovation (ESTI), African Union Commission, focused on key themes on education, development and the utilization of data for human advancement. He called for global cooperation and coordinated efforts among UN agencies and development partners for more effective data systems for planning and decision-making in education.
- The first panel on education monitoring, made up of representatives of regional organizations (ADEA, CARICOM, ECLAC, ESCAP, SPC, European Commission, and GPE), highlighted the collaborative efforts of international agencies and regional organizations. The second panel, composed of representatives of UN organizations (ILO, UNICEF, IMF, ITU, and UNDP), described their collaborative and individual efforts to address challenges in the collection, harmonization and use of education data towards achieving the SDG 4.
- The first panel on the role of technology in education data production, with representatives of organizations (OECD PISA, World Bank, Smart Africa, Organization of Ibero-American States), described how they are harnessing technological advancements to improve quality, accessibility and relevance of education data. The second panel, made up of representatives of Member States (Colombia, Saudi Arabia, Syrian Arab Republic, the United States, The Gambia, Indonesia, Brazil, and Spain), showcased strategies, challenges and innovative solutions to integrate technology into education systems.
- In her closing statements, Ms. Giannini summarized the challenges and solutions for education data improvement, addressing the urgent need to meld data collection with policy application. She

presented a vision where data was not merely a supplement to educational policy but a cornerstone to inform and direct decision-making.

- The draft provisional agenda of the second session of the EDS Conference presented by Ms. Montoya was endorsed. The session will take place in Paris from 21 to 23 April 2027.
- Mr. Luis Crouch, Rapporteur, Chair of the UIS Governing Board, presented a comprehensive synthesis of the Conference's achievements and discussions and emphasized the importance of collaborative efforts in advancing education data and statistics, so crucial for policy-making and educational improvement. Among the most salient points of the Conference were the importance of using data that is costly to collect, a clear demand for technical support, harmonization, integration, the acceptance of ranges of data and the most complex issue: the cooperation of politicians, civil society and technocracy.
- Ms. Montoya's closing statements highlighted the role of the EDS Conference in successfully establishing a vibrant international community dedicated to education data and statistics. The Conference addressed challenges; set forth an agenda to tackle a variety of issues, including benchmarking; proposed means of linking education data with policy-making and broader social development goals and encouraged continuous improvement and engagement.
- Ms. Giannini said that this first-of-its-kind conference would now become a staple on the global education agenda. She reiterated the importance of the creation of a community of practice; the need to invest more resources in education data for the future; and the inter-sectoral approach to link education data with other social development outcomes (greening education, digital transformation and youth participation). She marked the event as the beginning of an ongoing conversation on advancing SDG 4 monitoring.

Programme of work and timetable of the EDS Conference



CONFERENCE DECISIONS/CONCLUSIONS

The EDS Conference decisions are institutional and programmatic.

Institutional decisions

The EDS Conference institutional decisions included:

- The Conference decided to convene every three years, in plenary and in public sessions.
- The UIS will provide the Secretariat of the Conference.
- The Bureau will ensure smooth and efficient proceedings and examine draft decisions and recommendations before their submission to the plenary session for adoption.
- The TCG will be the implementing body of the Conference taking forward its recommendations between sessions.
- The TCG will be renamed Education Data and Statistics Commission (EDS Commission).
- The TCG will share the report presented to the SDG 4 High-Level Steering Committee (HLSC) through its Functional Area 2 on data and monitoring on the follow-up of the recommendations of the Conference in the subsequent session.

Programmatic decisions

At the programmatic level, there were nine resolutions and an average of 15-20 country comments on each, several written statements including 8 from the engagement day, in addition to very informative panels on each day. There were at least 300 comments during the Conference sessions and six emerging themes and cross-cutting issues were identified. These could be grouped into four categories: innovation in data collection, data integration, technical assistance on data production, and use of data and benchmarks. The EDS Conference programmatic decisions are presented below based on these four categories:

A. Innovating data collection

Many indicators' coverage rates are constrained by a lack of response to UIS country surveys, and innovation in data collection is needed to improve coverage and quality. The conference decisions related to innovative data collection include using tools to reduce the burden of data collection on countries such

as the use of a dynamic template, identifying alternative data sources for teacher data and simplifying data collection on education expenditure.

1. Administrative data: (a) supporting and scaling-up innovative approaches to increase ownership and decrease burden on Member States.
2. Teacher data: (d) supporting innovation in data collection reviewing the feasibility and updating teacher data collection instruments.
3. Education expenditure data: (b) simplifying data collection instruments including prioritization.

B. Data integration

Utilizing data from multiple data sources and harmonizing this data through modeling has emerged as a necessary tool for monitoring SDG progress. The statistical units of the WHO and ILO have relied on modeling and recently the GEMR in partnership with the UIS has also pursued modeling for completion and out-of-school rates. Next steps for the UIS include identifying harmonization methods and prioritizing indicators as well as establishing guidelines for best practice.

1. Integration of statistics decision:
 - (a) formalizing good practice for reporting estimates, for instance adapting the WHO GATHER checklist on health to education statistics.
 - (c) proposing a prioritization of other indicators that might benefit from development of estimation models that rely on multiple data sources.
2. Education expenditure data:
 - (a) creating a menu of harmonization methods of the FFA and SDG 1.a.2 indicators.

C. Technical assistance on data production

Providing technical assistance to countries in data production emerged as an important requirement during the Conference discussions. There was also widespread demand for harmonization, production of manuals and establishment of criteria. Decisions related to this type of capacity building included the following:

1. Administrative data: (d) developing capacity through tools and guidelines such as standard items and formats with all variables needed to estimate SDG 4 indicators.
2. Teacher data: (e) developing guidelines for data production on teachers to guide Member States.

3. Expenditure data: (c) developing and providing guidelines to national statistical offices on how to collect household expenditure on education.

D. Use of data and benchmarks

Data is costly but its absence is even more costly. Its rate of return is very high and, in some cases, could reach 100 to 1. However, if the data is not used, even a single dollar of investment will be wasted. A cost-benefit analysis, at both the level of policy and planning and in the classroom can show how important it is to use data.

It is also important to engage various stakeholders in the production of educational data. Politicians, academia, statisticians, civil society, and regional organizations among others, must be on board for better results and progress. By involving a broad spectrum of stakeholders in the production of education data, the education sector can benefit from more accurate, relevant, and actionable insights, leading to better outcomes for all.

Regarding the benchmarking process, Member States were invited to complete submission of national benchmarks, especially on the equity indicator, and to include them consistently in the national sector plan, regional dialogue, and global cooperation processes. Conference decisions included the following:

1. UIS is to strengthen efforts to improve the quality of the benchmark database.
2. UIS and GEMR are to propose a mechanism enabling countries to seek clarifications and propose corrections to the SDG 4 Scorecard assessment.
3. TCG/EDS Commission is to refine and approve the proposed SDG 4 Scorecard review mechanism.

In sum, the decisions of the inaugural session of the Conference on Education Data and Statistics helped define a technical agenda forward to guide the work of education stakeholders and the TCG for the next triennium. The Conference marked a historically significant milestone, establishing itself as a pioneering forum in the field of education, bridging a critical gap in the global education statistics landscape and setting the foundation stone for future education agendas.

CONFERENCE IN NUMBERS



130
Member States



80
Organizations



420
Participants



6
Emerging themes
and cross-cutting issues



5
Panels



7
Blogs



34
Panelists



+30
Decisions



14
Presentations



3
Monitoring tools



5
Keynote speakers



9
Resolutions



8 Position papers
and **6** Background papers



Launch of **SDG 4
Scorecard**

DECISIONS SUMMARY

Administrative data

- Support innovation in data collection to decrease burden on Member States (e.g., UIS dynamic templates)
- Scale-up hybrid approach for population data (use of national population: technical parameters and evaluation of statistical robustness)
- Create a **Task Force** to develop protocols and standards for data collection for groups affected by emergencies and crises
- Develop tools and guidelines for Member States as capacity building strategy

Education expenditure data

- Simplify data collection instruments including prioritization of data points
- Develop and provide guidelines to national statistical offices on data collection of household education expenditure
- Simplify guidelines and expand the National Education Accounts methodology
- Create a menu of harmonization methods of FFA and SDG 1.a.2 indicators

Household survey data

- Develop:
 - Standards and guidelines for data processing
 - Standardized survey items to measure education indicators
 - Standardized definitions and measures for factors such as household wealth, migration and disability
- Facilitate integration into large-scale surveys the recently developed data collection tools aligned with a more comprehensive concept of disability

Integration of statistics

- Formalize good practice for reporting estimates by adapting tools such as the WHO GATHER checklist on health to education statistics
- Develop a mechanism to address queries and suggestions to support country participation
- Expand the joint model of out-of-school and completion rates to other indicators, according to prioritization
- Explore integration for crisis-affected populations

Teacher data

- Teacher training
 - Task Force: Agree on a global definition of trained teachers in 2024
 - Produce standards for teacher training programmes
- Consider inclusion in the framework of policy indicators on attracting, preparing, and retaining teachers
- Data collection:
 - Review feasibility and efficiency of instruments
 - Develop guidelines for teacher data production to guide national data collection
 - Support innovation

Learning assessments and skills survey data

- Compile all decisions in a unique handbook of assessment harmonization and reporting
- Evaluate the implementation of assessment accreditation system
- Develop guidelines for ex ante standardization of context questionnaires
- Explore innovative methodologies for data capture on indicators with low coverage

National SDG 4 benchmarks

- Encourage countries to submit national benchmarks and invite them to consistently include them in national sector plans, regional dialogue, and global cooperation processes
- Improve quality of the benchmark database
- Refine SDG 4 Scorecard review mechanism
- Develop a mechanism enabling countries to seek clarifications and propose corrections to the SDG 4 Scorecard assessment