UNESCO CONFERENCE ON EDUCATION DATA AND STATISTICS

SUMMARY

FEBRUARY 2024

2024 CONFERENCE ON
EDUCATION DATA
AND **STATISTICS**

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Acronyms & abbreviations

ADEA	Association for the Development of Education in Africa
AI	Artificial intelligence
AU	African Union
ACER	Australian Council for Educational Research
AMPL	Assessments for Minimum Proficiency Levels
ASER	Annual Status of Education Report initiative - India
BMGF	Bill & Melinda Gates Foundation
CARICOM	Caribbean Community Organization
CONFEMEN	Conference of Ministers of Education of French-speaking countries
CRVS	Civil Registration and Vital Statistics
DAS	Connecticut Commission for Educational Technology
DEPP	Directorate for Evaluation, Prospective and Performance (DEPP), French Ministry of National Education
DHS	Demographic and health surveys
ECLAC	Economic Commission for Latin America and the Caribbean (United Nations)
EDS	Education Data and Statistics Commission
EiE	Education in emergencies
EMIS	Education Management Information Systems
ESCAP	Economic and Social Commission for Asia and the Pacific (United Nations)
ESTI	education, science, technology, and innovation
EU	European Union
FFA	Framework for Action
FLN	foundational literacy and numeracy (India)
GAML	Global Alliance to Monitor Learning
GEMR	Global Education Monitoring Report
GPE	Global Partnership for Education
GPF	Global Proficiency Framework
HDI	Human Development Index
HLSC	High Level Steering Committee
IBGE	Brazilian Institute of Geography and Statistics
ICT	information and communication technology
IIEP	International Institute for Educational Planning (UNESCO)
ILO	International Labour Organization (United Nations)

IMF	International Monetary Fund
INEE	International Network for Education in Emergencies
ISCED	International Standard Classification of Education
ISCED-T	International Standard Classification of Education for Teacher Training
ITU	International Telecommunication Union - United Nations
KNEC	Kenyan National Examination Council
KPI	key performance indicator
LDC	least developed countries
LASER	Learning, Administrative data, Surveys, Expenditure, Review and monitor progress project
MICS	multiple indicator cluster surveys
MILO	Monitoring Impacts on Learning Outcomes
MPL	minimum proficiency levels
NEP	National Education Policy (India)
NSO	national statistical office
OECD	Organisation for Economic Co-operation and Development
OEI	Organization of Ibero-American States
OOSC	out-of-school children
PASEC	Programme de données et d'analyses sur les systèmes éducatifs francophones
PARAKH	Performance Assessment, Review, and Analysis of Knowledge for Holistic Development
PIACC	Programme for the International Assessment of Adult Competencies (OECD)
SAQMEC	Southern and Eastern Africa Consortium for Monitoring Education
SDG4	Sustainable Development Goal 4
SPC	Pacific Community
STEM	science, technology, engineering, and mathematics
TCG	Technical Cooperation Group on SDG 4 Indicators
TOR	terms of reference
TVET	technical and vocational education and training
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNSD	United Nations Statistics Division
UOE	UNESCO-OECD-Eurostat data collection on education systems
WB	World Bank

EXECUTIVE SUMMARY

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 together[1].

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).

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

- 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.
- 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 l*earning 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. Th*ere 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 Bazil, 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
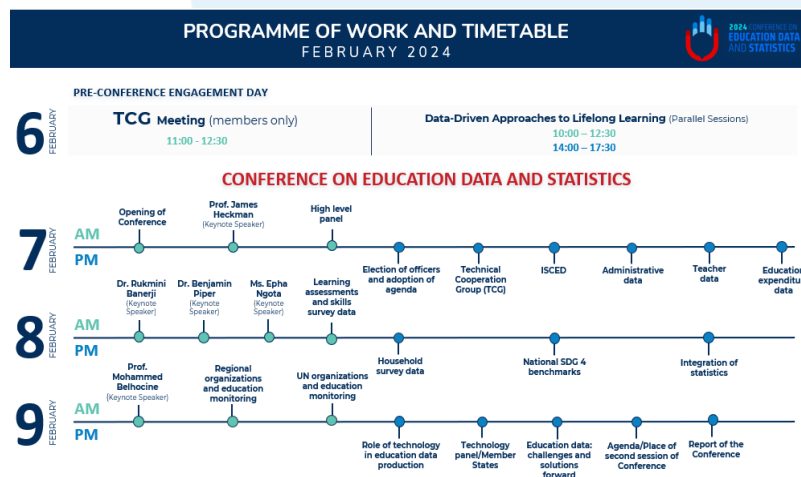
CONFERENCE DECISIONS/CONCLUSIONS

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 eight from the engagement day, in addition to highly 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 modelling has emerged as a necessary tool for monitoring SDG progress. The statistical units of the WHO and ILO have relied on modelling and recently the GEMR in partnership with the UIS has also pursued modelling 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

SUMMARY OF CONFERENCE DECISIONS

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

INTRODUCTION

The need for a dedicated conference on education data and statistics emanated from the absence of a regular, open forum for education statisticians to address crucial issues in the field. The inaugural session of the UNESCO Conference on Education Data and Statistics (EDS Conference) thus marks a historically significant milestone, establishing itself as a pioneering forum in the field of education and filling a crucial void in the global education statistics landscape. The Conference stands as a pivotal event in the historical path of international statistical forums, echoing the landmark statistical conferences of sister agencies such as those of the International Labour Organization (ILO), the United Nations Economic Commission for Europe (UNECE) and the United Nations Statistical Commission (UNSC).

The EDS Conference provides an inclusive, open, transparent, and expert international forum for monitoring, advising and steering the efforts of the international community to develop methodologies, standards and indicators to achieve the goals of SDG 4 – Education 2030 and future international education agendas.

The main objectives of the first session of the EDS Conference were to:

- establish an international community of practice of education statisticians guiding the Technical Cooperation Group on SDG 4 indicators (TCG);
- 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;
- debate the impact of technological developments on education statistics and ways in which the community of education statisticians can benefit from opportunities and address challenges.

Following a decision made by the TCG in 2022, the UNESCO Institute for Statistics (UIS) established a dedicated conference on education data and statistics. Prior to the Conference, the UIS had prepared position papers highlighting the serious issues and challenges in the field and

proposing an agenda forward. The papers were then discussed in regional consultations to identify regional priorities and discuss them at the Conference.

The first session of the EDS Conference was held at UNESCO headquarters in Paris from 7 to 9 February 2024. The event featured keynote speakers from academia, civil society organizations, Member States, and regional organizations. It included also high-level panels on education monitoring and technology. The Conference was preceded by an engagement day on 6 February featuring a meeting of the TCG members and parallel sessions cantered on the theme 'Data-Driven Approaches to Lifelong Learning'. The thematic sessions of the Conference were based on position papers encompassing diverse topics such as the International Standard Classification of Education (ISCED), administrative data, teachers, education expenditure, learning assessments, household surveys, benchmarks, and integration of education statistics. The Conference decisions serve to define a technical agenda forward guiding the work of the TCG for the coming three years.

This report provides detailed documentation of the first session of the EDS Conference. The first section presents the background and political framing of the Conference while the second summarizes the Conference objectives and preparations, including the consultation process. The third section gives a detailed description of the proceedings day by day, starting with a brief overview of the engagement day and continuing with details on the opening speeches, keynote addresses, high-level panel discussions, thematic sessions, country interventions, decisions, and main takeaways.

SECTION I

BACKGROUND OF THE CONFERENCE: APPROACH AND PREPARATION

Amid the system-wide efforts of the United Nations to achieve the Sustainable Development Goals (SDGs) from 2015 to 2030, UNESCO has the responsibility for coordinating action on SDG 4-Education 2030 via the High-Level Steering Committee (HLSC), which acts as the principal coordinating entity for global education stakeholders. The UIS, UNESCO's statistical division, has

the crucial role of developing the necessary methodologies, standards, and indicators to realize this goal, working in collaboration with various partners.

There has been a concerted push to enhance the capabilities of UN Member States in both generating and leveraging data to monitor advancements across the SDGs. The spotlight is on the transformative realm of education. The focus on SDG 4 has implied significant shifts in our measurement paradigm, introducing new, outcome-focused indicators cantered on learning, and embracing a variety of data sources to refine the estimation of traditional metrics.

The first universally accepted education goal paved the way for new opportunities and increased demands on national statistical systems and international agencies to produce comparable education statistics. The 2030 Agenda presents a high degree of ambition to achieve a unified agreement on definitions. This was uncertain for two reasons:

- the absence of concrete consultative architecture or platforms to bring education statisticians together and
- the fact that education policy is deeply rooted in national authority, reflecting each country's nuances which often challenge efforts to harmonize global standards.

To tackle these challenges, in May 2016, the UIS and the UNESCO Education Sector's Division of Education 2030 Support and Coordination (UNESCO ED/ESC) established the Technical Cooperation Group on the Indicators for SDG 4 Indicators (TCG), a vital consultative platform, which has formulated technical standards for most indicators, designing and refining methodologies for generating thematic monitoring indicators.

An important productive effort of the TCG was the strategic selection of benchmark indicators in 2019, representing a pivotal advancement to engage with countries and encourage them to set national targets for 2025 and 2030. This move significantly deviates from past development agendas, setting the education sector apart with an innovative mechanism designed to foster collaborative progress towards global educational objectives. This approach has enabled the UIS and the GEMR to introduce the SDG 4 Scorecard, a tool cantered on national benchmarks.

The SDG 4 framework also emphasizes the critical role of quality education and the need to enhance effective learning outcomes. The pursuit of these objectives demands that countries produce precise data that mirrors the learning outcomes and the array of knowledge and skills gained by students. This task involves tackling the intricate challenges of accurately measuring these outcomes and ensuring international comparability of the data collected.

The TCG has not only provided a forum for voicing the perspectives and challenges of Member States but has also positioned them at the heart of decision-making and at the head of the global education agenda.

POLITICAL FRAMING OF THE CONFERENCE

Since the adoption of SDG 4 in 2015, which posits education as the foundational pillar for achieving all other SDGs, the field of education statistics has been in dire need of an open forum to explore current methodologies and anticipate future data requirements. This is the only way to ensure the continued relevance and accuracy of international education statistics. The inaugural session of the UNESCO Conference on Education Data and Statistics (or EDS Conference) focuses on the critical intersection of education and data and recognizes the essential role of a dedicated platform for the exchange of knowledge, practices, and insights among education statisticians.

In 2021, the Secretariat of the TCG began work on the first UNESCO EDS Conference which was envisioned as a mechanism for education statisticians from all over the world to regularly communicate, discuss and reach consensus on key issues regarding education indicator measurement. The second equally significant role of the Conference was to evaluate the impact and benefits of technological and other developments.

The TCG, now the Education Data and Statistics Commission (EDS Commission), is responsible for advancing the recommendations made during the EDS Conference. The EDS Commission 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 EDS Conference in the subsequent session.

The UNESCO EDS Conference is a pivotal event in the history of international statistical forums, echoing landmark conferences of the International Labour Organization's (ILO), the United Nations Economic Commission for Europe (UNECE) and the United Nations Statistical Commission (UNSC). These conferences have served as a critical forum for the standardization of information, enhanced international cooperation and as a platform to address crises and adapt to evolving development circumstances.

This inaugural session of the EDS Conference represents the first of its kind in the field. This forum effectively fills a crucial void in the global educational statistics landscape. The Conference is committed to holding continuous sessions in the future to organize and unify diverse contributions from Member States and education stakeholders and to foster a collaborative atmosphere for the exchange of innovative ideas on education statistics. In doing so, it prepares the way for future agendas, ensuring that the global community can continue to respond to the evolving demands of education data and statistics in alignment with the broader SDGs.

SECTION II

CONFERENCE OBJECTIVES AND PROGRAMME OF WORK

The first session of the EDS Conference had the following objectives:

- to establish the process for an international community of practice among education statisticians and the relationship of the Conference with the TCG;
- to communicate, discuss, and reach consensus on key issues regarding concepts, definitions, methodologies, and operational aspects of SDG 4 indicator measurement in the form of recommendations and guidelines for adoption as international standards to improve comparability;
- to debate the impact of technological developments on education statistics and ways in which the community of education statisticians can benefit from opportunities and address challenges.

The EDS Conference was held from 7 to 9 February 2024 featuring keynote speakers from academia, civil society organizations, Member States and regional organizations and panels on education monitoring and technology. It was preceded by an engagement day on 6 February featuring a meeting of the TCG members and sessions cantered on the theme 'Data-Driven Approaches to Lifelong Learning' (**Figure 1**).

Figure 1. Programme of work and timetable of the EDS Conference
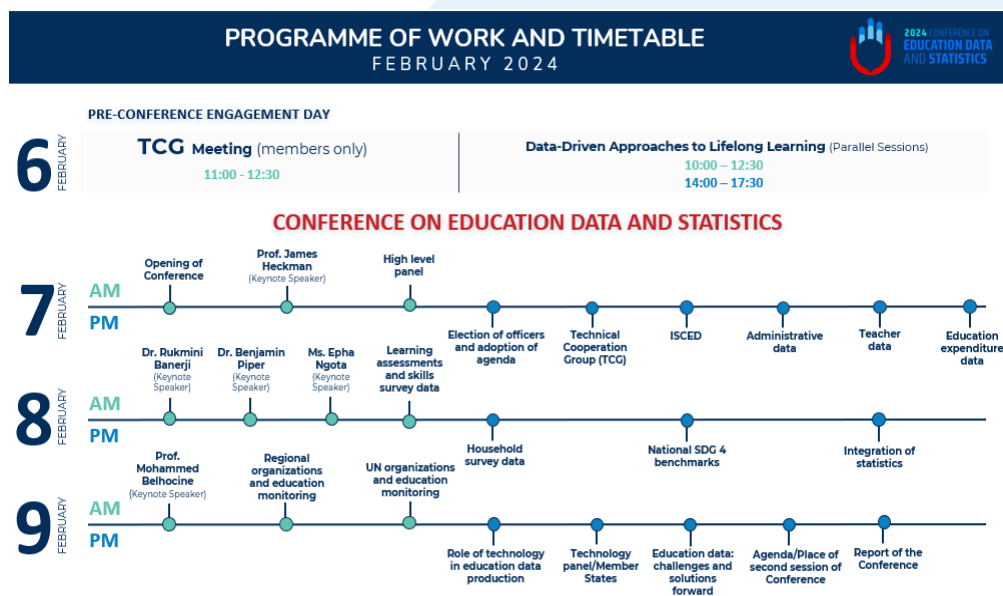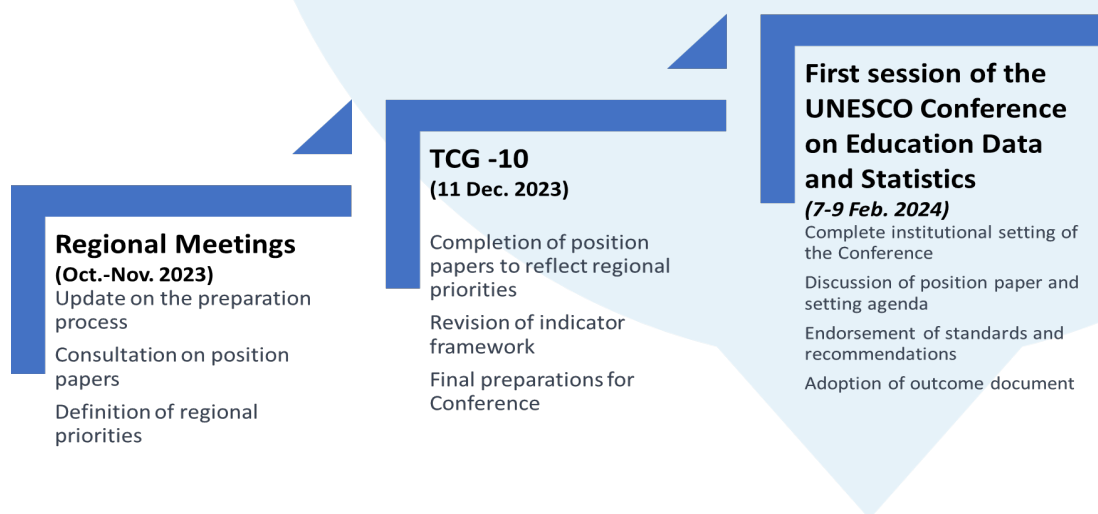

PREPARATION PROCESS: CONSULTATION

The thematic sessions of the Conference were based on position papers that were completed and discussed in regional preparatory meetings in 2023 and served to identify regional priorities and ensure these were discussed during the conference. They all had the same structure (background, data sources, challenges, potential solutions, and agenda forward) and addressed the following issues: Administrative data, Teachers' data, Educational expenditure data, Learning assessments and skills survey data, Household survey data, National SDG benchmarks, and Integration of statistics.

The Conference decisions helped define a technical agenda forward. They were organized in terms of issues related to the main data sources (e.g. administrative data, survey data, etc.), including, for instance, a decision to improve definitions on trained and qualified teachers; and some crosscutting issues (e.g. integration of multiple data sources, benchmarking process), including, for instance, a decision to introduce a process to receive and respond to comments about country classification in the SDG 4 Scorecard.

The main consultation meetings are described below and summarized in **Figure 2** and **Table 1**.

1. **Regional consultation meetings (October-November 2023):** A series of regional meetings, focusing on a comprehensive update of the preparation process, sought feedback on the position papers described above and identified regional priorities. These discussions provided a forum for addressing regional issues. The UIS presented the context, core issues and the challenges that countries face regarding data collection, processing, and international reporting. Participating countries were urged to review these topics critically, seek clarification, voice concerns, and contribute additional insights for consideration in each position paper. The UIS also outlined a forward-looking agenda to collaborate with Member States on improving the collection, processing, and reporting practices of data at national and international levels.

Figure 2. Preparatory meetings for the EDS Conference

Regional Meetings
(Oct.-Nov. 2023)
Update on the preparation process

Consultation on position papers

Definition of regional priorities

TCG -10
(11 Dec. 2023)

Completion of position papers to reflect regional priorities

Revision of indicator framework

Final preparations for Conference

First session of the UNESCO Conference on Education Data and Statistics
(7-9 Feb. 2024)
Complete institutional setting of the Conference

Discussion of position paper and setting agenda

Endorsement of standards and recommendations

Adoption of outcome document

2. TCG Meeting (11 December 2023): This virtual meeting, marking the 10th assembly of the TCG, finalized preparations for the Conference. The agenda included presenting outcomes from the regional meetings to pinpoint regional issues and priorities, discussing and finalizing the position papers, discussing the organization of the TCG, such as membership rotation.

Table 1. Preparatory meetings for the EDS Conference

Region	Date	Mode	Link to outcome document
Pacific	3-5 October	In-person (hybrid)	Outcome document
Arab States	16 October	Virtual	Outcome document
Asia	17-19 October	In-person (Hybrid)	Outcome document
Member States	25 October		
Latin America and the Caribbean	2-3 November	Virtual	Outcome document
Africa	24 November	Virtual	Outcome document
OECD countries	27 November	Virtual	Outcome document
GAML meeting	6-7 December	In-person (Hybrid)	
TCG meeting	11 December	Virtual	Post-Meeting Report
ED Talk: Spotlight on the Conference	13 December	Virtual	
African RECs co-hosted by ADEA	14 December	Virtual	
Global webinar	14 December	Virtual	

SECTION III

The first session of the EDS Conference, held from 7 to 9 February 2024, gathered a broad spectrum of experts and stakeholders, creating an international community of practice among education statisticians and guiding the TCG. Representatives came from 130 countries, with a total of 420 attendees. Among the participants, 276 were national experts, predominantly high-ranking officials from ministries of education, including ministers, deputy ministers for planning, and heads of statistics departments or learning assessment agencies. The Conference welcomed over 60 representatives from national statistical offices, contributing to the scope of the discussions during the event (**Figure 3).**

Figure 3. EDS Conference in numbers
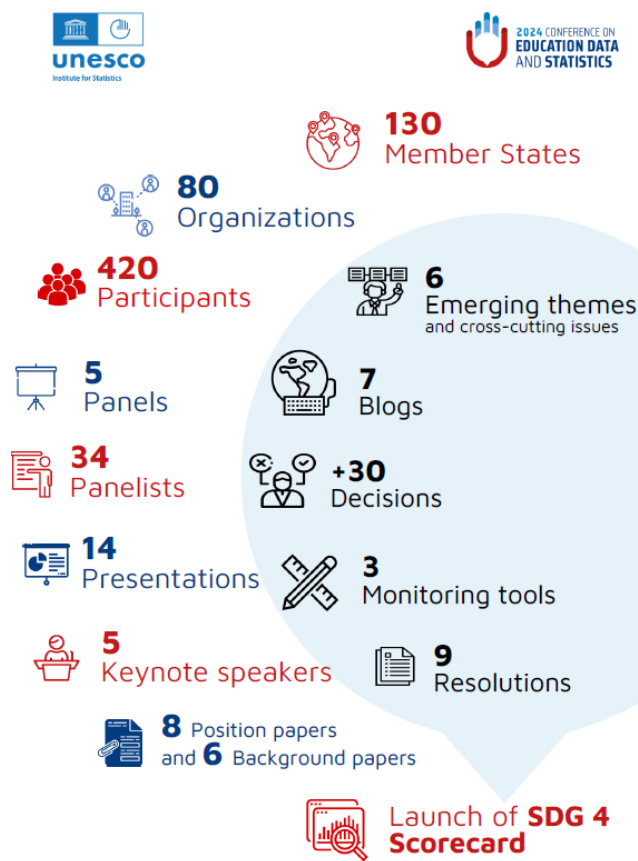
PRE-CONFEEFERENCE ENGAGEMENT DAY: 6 FEBRUARY 2024

On 6 February, an engagement day preceded the EDS Conference. Its aim was to delve deeper into specific issues that the Conference itself may not have sufficient time to address. It included two main events: sessions on data-driven approaches to lifelong learning and a meeting of TCG members.

The first event featured a joint introductory session emphasizing the importance of adopting a lifelong learning perspective that embodies an inclusive and integrated approach and recognizes evolving learning needs at different life stages, levels of education and qualifications, and

learning settings. It set the scene for the discussions and defined the issues that were covered in eight parallel sessions which explored the unique challenges and opportunities in education data collection, analysis, and utilization. The discussions emphasized the role of data in facilitating learning pathways, enhancing learning outcomes and contributing to educational equity and inclusion. These issues were as follows:

- data-driven insights and transformative solutions in early childhood education
- higher education data production
- technical and vocational education and training (TVET) and skills development
- adult learning and education
- education in emergencies
- high-quality data on gender equality in and through education
- sound data for good governance: strong national data systems as prerequisites to monitoring SDG 4
- effective data-driven decision-making

Rapporteurs from the different sessions of the engagement day reported the key messages and takeaways of the discussions from their respective sessions in the Conference.

The second event which consisted of a meeting of TCG members presented the results of the consultation that followed the 10th meeting of the TCG (December 2023), updating participants on the membership rotation process for 2024-2026 and discussing the final preparations for the Conference.

DAY 1: 7 FEBRUARY 2024

The first day of the UNESCO EDS Conference was structured as follows:

- Opening remarks by Ms. Stefania Giannini, Assistant Director-General for Education at UNESCO
- Opening remarks by Dr. Silvia Montoya, Director of the UNESCO Institute for Statistics
- Keynote address by Professor James Heckman, Nobel Laureate, Professor of Economics and Director of the Center for the Economics of Human Development

- High-level panel
- Launch of the Conference and adoption of rules of procedure, election of officers, adoption of agenda and programme of work
- Technical Cooperation Group on SDG 4 indicators (TCG)
- Information session on ISCED
- Sessions on administrative, teacher and education expenditure data

The Conference began with informative speeches from leaders in the field of education, with a welcome from Alex Selby Boothroyd, head of data journalism at *The Economist*, who underscored the importance of data-driven decisions in shaping our understanding of policy.

Opening Remarks: Ms. Stefania Giannini, Assistant Director-General for Education at UNESCO

([Recording](#))

Ms. Giannini introduced the Conference, emphasizing the pivotal role of data in advancing global education objectives. Her remarks are summarized as follows:

Why data is Important:
- Data helps us to understand how to make education better for everyone.
- Data is crucial for reaching education targets set for the 2030 Agenda, making sure everyone gets a good education.

The link between data and decisions:
- Robust data collection and analysis provides policymakers with critical insights into educational trends, disparities, and challenges, enabling them to make informed decisions and to allocate resources effectively.
- UNESCO's investment in tools such as the SDG 4 Dashboards and the Dashboard of Country Commitments and Actions to Transform Education provide policymakers with essential data for monitoring progress and identifying areas for improvement.

Building a data culture:

- Everyone involved in education must understand and use data.
- A "data culture" is marked by principles of transparency, collaboration, participation, and openness. This means being open, working together and teaching others how to use data well.

The future of data in education:

- New technologies like AI (artificial intelligence) are revolutionizing the way we access, share, and analyse data, with important implications for the future of knowledge, education and learning.
- However, we need to be careful about privacy and make sure technology is used fairly.

The Conference and beyond:

- This Conference is a key moment to discuss and improve how we use data in education.
- UNESCO is dedicated to helping countries use data to improve education.
- The goal is for everyone at the Conference to share ideas and help make these plans a success.

Opening Remarks: Dr. Silvia Montoya, Director of the UNESCO Institute for Statistics

([Recording](#))

Ms. Montoya warmly welcomed attendees and expressed her gratitude for their presence, recognizing the considerable distances many had travelled to join the Conference. Below is a summary of the main points of her remarks:

UIS 25th anniversary:

- As the UIS commemorates its 25th anniversary, this Conference serves as a culmination of efforts to systematize and consolidate high-profile consultative mechanisms, inviting Member States to contribute to the production of comparable education statistics.
- The Conference marks an important moment to evaluate how we gather and use education data globally.

Importance of education data:

- Since 2015, there has been a big push for better education data to help achieve sustainable development goals (SDGs), especially SDG 4 which focuses on education.
- This Conference aims to improve how we collect and analyse education data
- An essential component is the importance of consistent definitions and methods.

Fostering dialogue and standards:

- We must facilitate dialogue among Member States to harmonize definitions and methodologies in education policy at the national level.
- International organizations, such as the UIS, play a key role in bringing countries together to discuss and standardize education data.
- The UIS has worked closely with countries to develop technical standards for key education indicators.

TCG achievements:

- The Conference is a key time for the TCG which is undergoing its membership rotation process; the outcomes of this Conference will guide its work for the next three years.
- The significant achievement of the TCG in 2019 was to select a subset of benchmark indicators and to invite countries to set their national targets for 2025 and 2030.

Challenges and Innovations:

- Despite gaps in data, there are new sources of information and innovative methods of information extraction.
- The growing demands on education statistics stress the importance of leveraging technology and various data sources effectively.
- New tools such as the LASER Index, the AMPL report, and the SDG 4 Scorecard will help countries assess and improve their education data systems.

Looking forward:

- Everyone is encouraged to discuss openly with the aim to making education data more comparable and useful.

Finally, Ms. Montoya introduced Nobel Laureate Professor James Heckman as the keynote speaker, highlighting the importance of linking education with economics and policy.

Keynote Speaker: Professor James Heckman, Nobel Laureate, Professor of Economics and the Director of the Center for the Economics of Human Development

([Recording](#) – [Presentation](#))

Professor James Heckman emphasized the pivotal role of education in societal development and global prosperity and made the following key points:

- The challenge is to analyse existing data and devise new methods to collect new data on dimensions of learning not yet explored.

- **Education as a dynamic economic force**: Highlighted the transformative power of education in shaping economies and societies, Prof. Heckman stressed its role in providing opportunities for individuals and fostering a balanced and productive society.

- **Beyond formal education**: While formal education structures are important, Prof. Heckman argued that learning encompasses more than just formal schooling. He emphasized the significance of informal learning experiences and the influence of family and parental involvement on educational outcomes as well as the importance of coping with change.

- **The importance of data and statistics**: Prof. Heckman emphasized the need for a comprehensive and comparable statistical system to facilitate global understanding and policy development in education.

- **An interdisciplinary approach**: He advocated for a holistic approach to education research, integrating insights from economics, psychology, and sociology to better understand the multifaceted nature of learning and skills development.

- **Measurement of educational outcomes**: Prof Heckman discussed the importance of measuring both cognitive and non-cognitive skills for comprehensive evaluation. It is essential to move beyond solely focusing on test scores and standardized tests and to consider broader indicators of success.

- **Early intervention and investment**: Acknowledging the significance of early childhood education, Prof. Heckman emphasized the importance of investing in pre-primary education and early interventions to address skills gaps and to promote lifelong learning.

- **Expanding traditional educational metrics**: Prof. Heckman emphasized the need to move beyond a narrow focus on IQ scores and incorporate broader measures of skill development and learning outcomes. He advocated for the measurement of a wide range of skills, including executive functions, social skills, and emotional intelligence, to provide a more nuanced understanding of educational success and to address the diverse needs of learners.

- **A unified data system**: Prof. Heckman underscored the need for a unified data system that integrates various sources of information, including family, school, teacher, and community data. This will be a challenge. The importance of cross-disciplinary cooperation is essential to develop new sources of data and enrich traditional sources. This comprehensive approach would enable policymakers to make informed decisions and to develop effective education policies.

Overall, Professor Heckman highlighted the complexity of education systems and the importance of leveraging data and interdisciplinary approaches to promote equitable access to quality education and foster individual and societal development.

High-level panel

([Recording](#))

- Alex Selby Boothroyd, Head of data journalism at *The Economist*, Moderator
- H.E. Ms. Aurora Vergara Figueroa, Minister of National Education, Colombia
- H.E. Alghamdi Saad Abdulghani, Deputy Minister for Planning and Development, Ministry of Education, Saudi Arabia
- Venkatramana Hegde, Deputy Director General, Ministry of Education, Government of India
- Stephen Taylor, Director of Research, Monitoring, and Evaluation, South Africa
- Adil Bajja, Director of Strategy, Statistics, and Planning, Ministry of Education and Sports, Morocco
- Ms. Liveness Mwale, Deputy Director, Ministry of Education, Malawi

- Davis Adieno, Senior Director of Programs, Global Partnership for Sustainable Development Data
- Judith Herbertson, Head of the Girls' Education Department, Foreign, Commonwealth and Development Office, United Kingdom

This panel of experts and policymakers provided diverse perspectives, discussing the critical role of data in advancing education. Their comments reflected the multifaceted challenges and opportunities in harnessing data for educational improvement.

The moderator, Mr. Alex Selby Boothroyd, pointed out the significant financial and human resources needed for data collection and analysis and called for the strengthening of data systems both nationally and internationally.

H.E. Ms. Aurora Vergara Figueroa advocated for education as a tool for conflict resolution and promotion of peace. She emphasized the importance of investment in early childhood education and acknowledged the challenges in producing quality data.

From Saudi Arabia, H.E. Alghamdi Saad Abdulghani, Deputy Minister for Planning and Development of the Ministry of Education, shared his aspirations to enhance data systems for monitoring SDG 4 progress. He underscored the development of tools for utilizing new data sources securely and the launch of new data strategies. He highlighted the need for effective coordination.

Mr. Venkatramana Hegde presented the challenges of managing extensive education systems and the role of digitization. He emphasized his country's efforts to track individual student learning experiences through unique identifiers.

Mr. Stephen Taylor moved the discussion from measuring access to learning outcomes, stressing the importance of early education, infrastructure development and the use of individual student data in policymaking.

Mr. Adil Bajja called for national indicators and data granularity for effective planning and budgeting. Acknowledging the challenges of monitoring education quality, he advocated for quality evidence and the increased use of big data.

Ms. Liveness Mwale shared statistics on education challenges, describing efforts to address gender disparities.

Davis Adieno emphasized the critical role of data and technology in achieving SDG 4 and in working towards the broader social good through the transformative potential of technology and big data in education.

Judith Herbertson stressed the need for data to monitor the education system effectively, focusing on school safety and the classroom environment.

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

Session 1: Launch of the Conference: adoption of rules of procedure, election of officers and adoption of agenda and programme of work

([Recording](#))

Documents and presentation:

- 1 UIS/EDS/1.1: **Launch of the UNESCO EDS Conference** ([Document](#) – [Presentation](#))
- 1 UIS/EDS/1.2: **Rules of procedure: UNESCO EDS Conference** ([Document](#))
- 1 UIS/EDS/1.3: **Annotated agenda** ([Document](#))
- UIS/EDS/1.4: Provisional programme of work and timetable ([Document](#))

Professor Dankert Vedeler, First Vice-Chair and acting chair of the UIS Governing Board, officially launched the Conference. He replaces the Chairperson in all functions when the latter is temporarily incapacitated or unavailable. In his opening Statements, he emphasized the importance of robust data for policymaking. He encouraged the development of methodologies based on emerging technologies to strengthen capacity-building among Member States and committed to continuously increasing global coverage and quality of data. He confirmed the work being done now would be a foundation for the post-2030 agenda and considered the Conference as an important milestone for addressing the challenges of the future.

After re-iterating the objectives of the Conference, he presented the rules of procedure including Rule 1 about classifying the Conference as a Category IV meeting, i.e. « international congress »; Rule 8 specifying that the Conference shall meet in both plenary and in public sessions; and Rules 7.1 and 7.2, describing the election of the Bureau of the Conference and clarifying that the Conference shall elect a chairperson, two vice-chairpersons and a rapporteur.

He explained the special procedure to be followed in electing the chairperson for the first session of the Conference:

- The Chairperson of the UIS Governing Board, after consultation with the UIS Director and the members of the TCG, opens the meeting, launches the Conference, and immediately puts forward to the floor the launch of the Conference and the adoption of the rules of procedures: these were unanimously adopted by all participants.

Decisions: Launch of the Conference

The UNESCO Conference on Education Data and Statistics:

1. Having considered the proposals presented by the Secretariat concerning the governance arrangements, vision, purpose, and operating principles of the Conference;
2. Expresses its appreciation to UNESCO and its Institute for Statistics for initiating this new series of conferences;
3. Shares the view that such conferences are necessary and should be conducive to greater international coordination in the field of education data and statistics and enhanced progress towards the relevant international sustainable development goals;
4. Endorses the governance proposals and operating principles set out in this document;

Adopts the proposed Rules of Procedure attached to the documentation (1 UIS/EDS/1.2)

- Following the adoption of the rules of procedures, the Chairperson of the UIS Governing Board immediately puts forward to the floor the nomination for the position of Chairperson, whose name would be chosen from among the TCG members of the Bureau. Ms. Magda Tomasini, Director at the Directorate of Evaluation, Foresight and Performance at the

Ministry of National Education of France, was unanimously elected as the chair of the Conference.

- Ms. Tomasini immediately assumed the chairpersonship and proceeded to the election of the other Conference officers. The resulting Bureau is presented in **Table 2**.

Table 2. Bureau of the Conference

Title	Name
TCG co-chairs	Ms. Silvia Montoya – Director UNESCO Institute for Statistics (UIS) Mr. Manos Antoninis – Director Global Education Monitoring Report (GEMR)
Chairperson	France: Ms. Magda Tomasini - Director at the Directorate of Evaluation, Foresight and Performance at the Ministry of National Education of France
Vice-chairs	Brazil: Ms. Betina Fresneda - Chair of the TCG working group on household surveys The Gambia: Mr. Alpha Bah - Chair of the TCG working group on administrative data
Rapporteur	Dominican Republic: Mr. Luis Crouch - Chair of the TCG working group Global Alliance to Monitor Learning (GAML)
Members	Armenia: Ms. Tamar Arakelyan Bangladesh: Mr. Sheikh Mohammed Alamgir Oman: Mr. Khalid Khalaf Al Maawali and Ms. Shoruq Saleh Al Salti

In her acceptance speech, Ms. Tomasini highlighted the vital importance of high-quality reliable data in shaping informed decision-making and robust policy development within the education sector. She stressed the necessity for data to be also readily accessible, to underpin effective and impactful education initiatives. She expressed her staunch support for the Sustainable Development Goals (SDGs), with a particular emphasis on SDG 4, which focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. This dedication reflects a broader, global commitment to prioritizing education as a fundamental pillar for sustainable development.

Following the election of officers, Ms. Montoya presented the draft agenda and programme of work outlining the schedule and topics for discussion throughout the Conference: both documents were unanimously adopted. Guidelines for country interventions and comments

were presented to ensure orderly and constructive participation during the Conference proceedings.

Session 2: Technical Cooperation Group on SDG 4 indicators (TCG)

TCG decisions 2016–2023

MADRID

Reporting: Disagree on use of placeholders
Methodological development: SDG4 indicator metadata structure developed

TCG 2 — MAY 2016

DUBAI

Reporting: 33 indicators
Added: 4
Methodological development: 12

TCG 4 — JUN 2017

YEREVAN

Reporting: 37 indicators
Added: 4
Discontinued : 1
Methodological development: 15 revised
Completion estimates approved
Benchmarks: 7 indicators agreed

TCG 6 — NOV 2018

VIRTUAL

Reporting: 43 indicators
Methodological development: Out-of-school estimates approved

TCG 8 — OCT 2020

VIRTUAL

Institutional: Position papers, TCG rotation, Conference preparation
Methodological development: Global standards for teacher qualifications
Eligibility criteria for Learning.

TCG 10 — NOV 2022

TCG 1 — OCT 2016

WASHINGTON DC

Institutional: Organization of TCG: objectives and functions
Global and thematic indicator framework endorsed

TCG 3 — JAN 2018

MONTREAL

Reporting: 29 indicators
Methodological development: 10

TCG 5 — AUG 2019

MEXICO

Reporting: 33 indicators
Added: 1
Discontinued: 1
Methodological development: 9 revised

TCG 7 — NOV 2021

VIRTUAL

Reporting: 39 indicators
Added: 2
Methodological development: 3 revised
Benchmarks:: Equity indicator approved

TCG 9 — DEC 2023

VIRTUAL

Reporting: 44 indicators
Added: 3
Discontinued : 2
Methodological development: 3 revised ; national population rules defined.
Benchmarks: Internet connectivity indicator approved (TES)

Ms. Silvia Montoya provided an overview of the activities of the TCG and the progress it has made in enhancing the global education indicator framework. The main highlights were:

- **Development of methodologies and standards:** The leadership of the TCG has been crucial in shaping methodologies and standards that are central to the monitoring and achievement of the SDG 4 targets. By focusing on robust, accurate and universally applicable measures, the TCG is ensuring that the global community can track progress toward educational goals with reliability and consistency.

- **Engagement of Member States:** The active participation and engagement of Member States in the TCG's activities have been instrumental in moving towards these goals. Their involvement in meetings and deliberations has not only enriched the discussions but also ensured that the perspectives and needs of a diverse range of education systems are considered in the development of indicators and methodologies.

- **Contribution of stakeholders and civil society:** Beyond government actors, the TCG has successfully engaged a broad spectrum of stakeholders, including partners from civil society, academia and the private sector to allow for a better understanding of the challenges and opportunities in developing more effective education data and statistics fostering collaborative solutions that benefit from the strengths and expertise of various sectors.

Likewise, the UIS director emphasized that the TCG is undergoing the rotation of its members for the period 2024-2026. This reflects the dynamic and inclusive nature of the group and ensures that a diverse array of perspectives and experiences contribute to its vital work. The final composition of the TCG for the coming period is now finalized (**Figure 5**). The TCG looks forward to working with the countries that remained TCG members for the coming period: France, Germany, Armenia, Estonia, Brazil, Jamaica, Bangladesh, Pakistan, Gambia, and Oman. The group also welcomes new TCG members: Cyprus, Norway, Romania, Argentina, Chile, Guatemala, Lao PDR, Malaysia, Sri Lanka, Thailand, Tonga, Benin, Côte d'Ivoire, Equatorial Guinea, Nigeria, South Africa, Iraq, and Tunisia. Finally, the TCG is very appreciative of the valuable contributions of the countries that will no longer stay as members for the coming period but remain observers, namely: Canada, Sweden, Russian Federation, Colombia, Cuba, Mexico, China, Indonesia, Angola, Zambia, Lebanon, and Saudi Arabia.

Figure 4. Composition of the TCG for the period 2024-2026

TCG membership 2024-2026					
Electoral groups	**GROUP I** Western Europe and North America	**GROUP II** Eastern Europe	**GROUP III** Latin America and Caribbean	**GROUP IV** Asia and the Pacific	**GROUP V(a)** Africa	**GROUP V(b)** Arab States
2024-2026 (28 Member States)	**Cyprus** France Germany **Norway**	Armenia Estonia **Romania**	**Argentina** Brazil **Chile** Guatemala Jamaica	Bangladesh **Lao PDR** **Malaysia** Pakistan **Sri Lanka** **Thailand** **Tonga**	**Benin** **Côte d'Ivoire** **Equatorial Guinea** Gambia **Nigeria** **South Africa**	**Iraq** Oman **Tunisia**

In recognition of these efforts and to further enhance its effectiveness, the UNESCO EDS Conference has been invited to acknowledge several important developments:

- **Revised terms of reference:** The Conference is invited to take note of the TCG's revised terms of reference, which were endorsed by Member States in 2023. These revisions reflect updates to the TCG's objectives, strategies, and operational frameworks, aligning them with current and future needs in education data and statistics.

- **Renaming of the TCG to Education Data and Statistics Commission**: A significant proposed change is the renaming of the TCG to the "Education Data and Statistics Commission" (EDS Commission). This signifies an evolution in the group's mandate and an expansion of its roles and responsibilities, placing the TCG in a central position as the primary body for coordinating global education data and statistics, as well as highlighting its authority and comprehensive scope in this domain.

- **Taking forward recommendations of the EDS Conference between its sessions**: Under its new designation as the EDS Commission, the TCG is expected to take forward the

recommendations of the UNESCO EDS Conference between its sessions. This role emphasizes the commission's ongoing commitment to the development of methodologies and standards and also the practical implementation of strategies and recommendations to enhance the quality, availability and use of education data and statistics globally.

These developments reflect a concerted effort to strengthen the global education data and statistics landscape, enhancing the capacity to monitor progress toward SDG 4 and ensuring that education systems worldwide can benefit from high-quality data and insights.

Country interventions:

Egypt emphasized the need for the UIS to broaden its focus beyond universities to include other higher education institutions that are particularly important in the country. The focus must be on higher education as a whole.

Concerns were raised regarding the comparability of data between small and large countries, emphasizing the importance of ensuring a balanced approach to enable meaningful comparisons.

There was consensus on the need to address the challenge of comparing data across countries, particularly considering the disparities between large and small countries. It was agreed that discussions on this matter would continue within the TCG, with recommendations provided to the UIS.

All members were encouraged to actively participate in the TCG, and efforts were made to fill vacant positions, with only vacancies in Latin America awaiting political clearance.

Decisions: Technical Cooperation Group

Noting the progress achieved since 2016 by the Technical Cooperation Group on SDG 4 indicators (TCG) in supporting the leading role of the UIS in the development of methodologies and standards, as per paragraph 100 of the *Education 2030 Framework for Action*; acknowledging the engagement and active participation of Member States in the activities of the TCG in their meetings and deliberations; acknowledging the engagement and contribution of stakeholders, partners and civil society, in the work of the TCG:

The UNESCO Conference on Education Data and Statistics is invited:

1. to take note of the revised Terms of Reference of the TCG endorsed by Member States in 2023 (1 UIS/EDS/2.1);

2. to take note, as per document 1 UIS/EDS/1.1 (point 13) that the:
   (a) TCG will be renamed "Education Data and Statistics Commission" (EDS Commission);
   (b) TCG will remain the primary body for the coordination of global education data and statistics;
   (c) TCG will take forward the recommendations of the EDS Conference between sessions.

Session 3: International Standard Classification of Education: challenges and solutions forward (Information)

(Presentation / Official document)

The information session on the International Standard Classification of Education (ISCED) provided a critical platform for discussing the challenges and advancements associated with this comprehensive framework. Led by Silvia Montoya, Director of the UIS, the session explained many of the intricacies of ISCED, highlighting its pivotal role in transforming national education data into internationally comparable categories.

ISCED serves as the cornerstone for global education statistics, enabling cross-national comparisons and in-depth analysis of education systems worldwide. As the custodian of ISCED, UIS is responsible for its development, maintenance, and the promotion of its consistent application across data collection and analytical activities. The framework encompasses various classifications, including ISCED-P 2011 for national educational programmes, ISCED-A 2011 for educational attainment, ISCED-F 2013 for fields of education and training, and ISCED-T 2021 for teacher training programmes and related qualifications.

The information session highlighted several challenges related to ISCED's application, such as the lack of harmonization in classifying national programmes and difficulties in accurately categorizing educational programmes at different ISCED levels. The ongoing review process was particularly emphasized as a collaborative effort between UIS, Eurostat and the OECD aimed at addressing classification issues and refining the definitions of academic and professional programmes for ISCED levels 6-8.

Among the issues discussed were:

- the classification of national education programmes
- the need for harmonized categorization across countries
- specific challenges such as home schooling, the classification of early childhood programmes, and defining academic/professional programmes for higher education levels.

The session concluded with a strong endorsement of the ISCED review panel, established by UIS in 2023 to tackle these challenges. The proposed decision emphasized the importance of the ISCED framework in facilitating global education analysis and called for the TCG (or EDS Commission) to closely follow the outcomes of the ISCED review panel's deliberations.

Country interventions:

Member States expressed concerns about the integration of non-formal education into ISCED 2011 mapping and emphasized the importance of age classification and the need for further clarification on non-formal education. There is a need for precise guidelines and classification in ISCED, considering new areas in national programmes and language variations.

Malaysia emphasized the integration of non-formal education into ISCED to improve education attainment and enrolment, highlighting the need for better classification to enhance data coverage.

Belgium questioned the TOR of the ISCED panel, particularly regarding the mapping of STEM and AI disciplines.

Nigeria raised concerns about the age classification and non-formal education classification in the ISCED 2011 questionnaire.

The Director of the UIS reiterated the ISCED panel's mandate to address all issues, subject to UNESCO governance processes, including the revision of ISCED classifications. She encouraged Member States to participate and contribute to these activities, with UIS colleagues facilitating connections to address concerns.

Decisions: International Standard Classification of Education

Noting the information presented in the document "International Standard Classification of Education: Challenges and solutions forward" (1 UIS/EDS/3); acknowledging the role of the UIS as the custodian of ISCED and the support provided to countries in the classification of their national programmes in accordance with ISCED:

The UNESCO Conference on Education Data and Statistics:

1. welcomes the establishment of the ISCED review panel by the UIS in 2023 in accordance with ISCED 2011 and 2013 classifications;
2. invites the TCG/EDS Commission to follow up on the results of the deliberations of the ISCED review panel.

TAKEAWAYS

- need for harmonized categorization across countries
- additional challenges include:
    o home schooling
    o classification of ECE programmes
    o defining academic/professional programmes for higher education levels

Session 4: Administrative data: challenges and solutions forward

([Presentation](#) / [Official document](#))

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. He highlighted that the collection of key variables such as student enrolment, schools, infrastructure, and teacher metrics through the Education Management Information Systems (EMIS), accounts for over 50% of data related to SDG 4 indicators.

Mr. Bah organized the challenges within administrative data systems into three categories: quality of data, quantity of data and biases. The lack of ability of countries to respond to the UIS questionnaire hinges on several factors:

- the **availability of data at the national lev**el

- **failure to meet established standards** so the UIS cannot publish them

- **incomplete data** leading to unreliable enrolment indicators or out-of-school rates

- **quality of analysis**, which relies heavily on the comparability of data across countries, adherence to international standards like the ISCED, and the availability of data.

- **gaps in data production for specific indicators** despite clear concepts and established methodologies for SDG 4 indicators,

- **lack of** methodology for estimating **regional and global averages.** This methodology is being revised to account for the impacts of COVID-19, highlighting the complexities of maintaining data integrity in changing global contexts.

Among the key UIS developments introduced by Mr. Bah were the following:

- a **dynamic template** for data reporting and analysis

- a **hybrid strategy for handling population data** to maintain consistency in time series and achieve comprehensive coverage.

Together, these two elements empower countries by allowing the customization of templates to align with their specific needs. Technical support is essential enhance the capabilities of countries to collect and report data, ensuring that data management processes are more responsive and tailored to the unique challenges and requirements faced by each country.

In addition, to address the challenges associated with administrative data, the session introduced the innovative **LASER** tool (Learning, Administrative data, Surveys, Expenditure, Review and monitor progress) developed by the UIS. LASER maps national data collection tools and can identify the technical support most needed by countries for data production. It can identify and bridge data gaps, thereby enhancing the capacity of countries' education data ecosystems for informed policymaking. LASER assesses the collection and use of a variety of data sources necessary for governance in the education sector, ensuring they meet international standards, cover key indicators including dimensions of inequality, and facilitate regular reporting of expenditures and progress monitoring.

The session concluded with open questions to Member States, emphasizing this collaborative approach towards overcoming data challenges and advocating for enhanced quality and accessibility of education statistics globally. This initiative represents a significant step forward in optimizing administrative data for effective policy planning and advancing the educational agenda.

Country interventions:

This session on administrative data provoked a variety of interventions from Member States:

India emphasized the need for more frequent updates of UIS data, suggesting that data release should occur more than twice a year to keep the information current.

Côte d'Ivoire discussed the challenges of incorporating national population data, especially when projection data is unavailable, and mentioned the penalties faced due to data unavailability.

Jordan commended the developments in the country which were already improving the quality and coverage of administrative data.

Morocco raised concerns about delays in updating national population data and United Nations (UN) data due to census delays.

Ireland requested that the timeline for data updates by UIS should align with the school year, acknowledging the time it takes for schools to upload data.

Barbados highlighted the limited data coverage for technical and vocational education and training (TVET), suggesting the use of both household and administrative data.

Côte d'Ivoire also expressed concerns regarding indicator validation and the use of national population data in the absence of recent census data.

In conclusion, the Chairperson, Alpha Bah, affirmed the value of incorporating national population data to increase reporting accuracy and acknowledged the potential of proxy indicators. He also mentioned that the dynamic template could be hosted by countries for independent publication purposes.

These interventions reflect the many challenges facing countries in managing and reporting education data. They demonstrate need for flexibility in data collection and reporting methods, the importance of timely and accurate data updates, and the potential benefits of integrating various data sources to enhance the quality and comprehensiveness of educational statistics.

Decisions: Administrative Data

Noting the information presented in the report "Administrative data: challenges and solutions forward" (1 UIS/EDS/4); acknowledging the collaborative efforts of the international community; further noting the challenges affecting comparability of education data, namely:

- quantity of data collected;
- biases created by different data sources;
- quality of data collected,

The UNESCO Conference on Education Data and Statistics:

1. Requests the TCG/EDS Commission to focus efforts on:

   (a) supporting and scaling-up innovative approaches to increase ownership and decrease the burden on Member States, such as the dynamic template;

   (b) scaling-up the hybrid approach regarding population data;

   (c) developing protocols and standards to capture the impact of emergencies and crises on affected populations;

   (d) developing capacity through tools and guidelines such as standard items and formats with all variables needed to estimate SDG 4 indicators.

TAKEAWAYS
- challenges continue in quality of data collected and quantity of data (incompleteness, biases, gaps, and a lack of methodology for estimation
- need for innovative approach for data collection, such as the UIS dynamic template
- hybrid strategy for population data
- the new tool LASER can identify technical needs of countries for collecting data
- capacity development through tools and guidelines

Session 5: Teacher data: challenges and solutions forward

([Presentation](#) / [Official document](#))

The director of the Global Education Monitoring Report, Manos Antoninis, focused on teacher related indicators in SDG 4 (specifically 4.c.1 to 4.c.7). He presented the challenges and data coverage associated with monitoring teacher qualifications, training, and compensation.

Among the key Indicators are:

- the minimum required qualifications for teachers, ensuring that teachers meet basic educational standards to improve teaching quality and student learning outcomes; and
- measuring the percentage of teachers qualified according to national standards. A teaching workforce must be academically qualified to teach at the various levels.

Other indicators include teacher-student ratios, teaching salaries compared to similar professions, teacher attrition and teacher development through in-service training.

Data for these indicators are sourced from UIS surveys, OECD, ILO, and various other international assessments. Among the challenges are:

- **Low data coverage:** This was particularly noted for indicator 4.c.5, which concerns the salary of teachers. Most countries lack data on salaries or benchmarks for comparison.
- **Comparability:** There is a lack of empirical evidence on trained teachers and no universal teacher policy.
- **Conceptualization and standardization:** There is no shared agreement on the conceptualization and definition of standards for qualifying teachers, leading to comparability challenges.
- **Teacher policy and development**: There is a significant gap in the collection of data related to teacher attrition and a lack of guidance and clarity on collecting data through national information systems.

In addressing the agenda moving forward, Mr. Antoninis highlighted the need to work closely with Member States through:

- a **global standard for academic qualifications** and
- **mapping of training programmes** to capture the full population of teachers

Not only must data collection be improved, but the feasibility of the data being collected must be examined.

The presentation concluded with a call for **introducing policy indicators to attract, retain and monitor teachers effectively**.

Country interventions:

India's intervention focused on the calculation of the teacher attrition indicator, emphasizing that it merely represents the supply structure rather than capturing the essential fact of teachers leaving the profession. There is a need for a more nuanced approach to measuring teacher attrition that reflects actual departures from the teaching field.

Malawi sought clarification on the standards for comparing teacher salaries across different countries, questioning the methodology for standardizing salaries to ensure fair comparisons. There is great complexity in creating comparable salary indicators across diverse educational systems.

Ethiopia raised a fundamental question about the internationally agreed definitions of "qualified" and "trained" teachers. The challenge of comparing teacher qualifications between countries, especially from pre-primary to primary levels and the need for a standardized or globally agreed framework is evident.

Chad proposed integrating the concepts of training and qualification into a single indicator to enhance the report's precision. This suggestion points to the desire for a more streamlined approach to capturing the nuances of teacher qualifications in educational statistics.

Sweden expressed support for the work carried out on defining and conceptualizing the ISCED classification and the use of microdata for statistical analysis, emphasizing the importance of refining the framework for classifying teacher data to improve the standardization and quality of teacher indicators.

Haiti addressed the challenge of collecting comparative salary data and coding minimum qualifications due to differing national definitions and standards. This concern illustrates the difficulties encountered in producing comparable indicators in countries with varied educational and administrative contexts.

Belgium enquired about the application timeline and the implications of the ISCED-T pilot study for clarifying definitions and methodologies related to teacher training. There was evident anticipation of clearer guidelines and standards for teacher training classifications.

Lebanon discussed the domestic issue of recognizing qualified teachers due to non-functioning institutions that grant professional titles, affecting the proportion of teachers considered qualified under national standards. This intervention sheds light on the challenges of aligning national qualifications with international indicators.

France highlighted the need to clarify which population of teachers (new vs active) the indicators apply to, given the diversity in teacher experience and the recent introduction of standards. This intervention calls for a more differentiated approach to evaluating teacher qualifications and training.

Lesotho expressed concerns about the challenge of ensuring teachers are qualified and trained. The process to becoming a teacher is criticized for not acknowledging diverse qualifications, with the current system recognizing teachers as qualified solely based on their training.

Libya raised the issue around the indicators for teacher salaries, particularly enquiring about the comparison of these salaries with those of other professions within the public school system.

Chile focused on the definition of a qualified teacher, emphasizing the need for certification, traditional teaching roles, and the completion of educational studies. Chile's teacher shortage must be viewed through a career trajectory, using various indicators to analyse the problems in teaching, including teacher-student ratios and curriculum effectiveness.

The Dominican Republic asked for a definition of what constitutes a qualified teacher. A good evaluation of teacher performance can lead to relocation of the teacher to other areas of

teaching. The delegate also voiced concern that there is no longer a connection between teaching and the demands of the labour market.

Guinea highlighted the issue of teacher motivation, noting that salaries alone do not provide sufficient incentive. Despite teacher strikes in demand oh higher pay, the government suggests motivating teachers through other strategies than salary. The discussion suggests exploring other parameters beyond pay.

Curaçao addressed the issue of data availability, particularly the lack of information from private schools. The discussion included how salaries are determined and the challenges in managing this aspect due to incomplete data.

Italy suggested revisiting the minimum qualifications required to become a teacher, noting the complexity of qualifications across different countries. Italy advocates for a common standard or framework for these minimum qualifications to simplify entry into the teaching profession.

Bolivia distinguished between training and qualification, emphasizing the need for teachers to adapt curricula to reflect cultural, linguistic, or curricular relevance, especially given the country's diversity with 36 languages.

Grenada shared its challenges in obtaining information on teacher salaries, especially from private schools. The country is interested in learning about good practices from other countries regarding the qualifications of teachers in private schools.

Somalia discussed teacher motivation, emphasizing that salaries can be a significant motivating factor. The country suggests considering societal values and future prospects as additional motivators for teachers.

Panama requested clarification on defining effective training, noting the shift to virtual and continuous training post-pandemic. The delegate also discusses the complexity of determining teacher salaries due to additional allowances and compares this with university teachers and retired teachers who continue to work.

Ireland focused on relative salaries and the experience of teachers, suggesting standardization for new entrants. It called for adjusting salaries to the cost of living, ensuring that teachers can maintain a decent standard of living.

Mr. Antoninis acknowledged the challenge in finding a common denominator regarding teacher salaries and decided to focus directly on the salary indicator. He suggested that data should come from multiple sources, although it might be difficult to produce. He supported the idea of standardizing salaries, especially for new entrants, and mentioned that the information could be sourced from labour force surveys, classifying individuals with tertiary education as professionals. This issue requires more attention. He echoed India's concerns about the complexities of the administrative system, including attrition and extended leave.

Decisions: teacher data

Noting the information presented in the report "Teacher data: challenges and solutions forward" (1 UIS/EDS/5); noting the challenges associated with collecting and reporting teachers' data;

The UNESCO Conference on Education Data and Statistics:

1. Requests the TCG/EDS commission to:
    (a) agree on a global definition of trained teachers in 2024 through a dedicated task force;
    (b) produce standards for teacher training programmes;
    (c) consider policy indicators on attracting, preparing, and retaining teachers that are today not part of the framework;
    (d) support innovation in data collection reviewing the feasibility and updating of teacher data collection instruments;
    (e) develop guidelines for data production on teachers to guide Member States.

Session 6: Education expenditure data: challenges and solutions forward

([Presentation](#) / [official document](#))

In presenting the challenges and solutions forward on educational expenditures, the Director of the UIS, Dr. Montoya outlined several key points regarding the monitoring of education expenditures: the complexity of expenditure indicators, which involve multiple data sources (UIS, IMF, UOE) and the need for consensus in the defining and measuring various concepts such as GDP, levels of expenditures and the number of students.

Some of the key challenges are:

- **Low coverage for some indicators**: A primary challenges is the low coverage of data for certain indicators. This is particularly the case for private expenditures on education, attributed to data collection problems and low reporting rates.
- **Conflicting data sources for public expenditures**: Harmonizing indicators and resolving data conflicts is a significant challenge. Although they aim to provide consistent estimates, there are conflicting data sources from UIS, IMF, and other agencies.
- **Measurement for private expenditures**: The methodology used for measuring private expenditures lacks clarity in some instances, making it difficult to assess and compare these expenditures accurately.

To address these challenges, the UIS proposed several forward-looking strategies:

- **Creating a menu of harmonization methods**: For SDG 1.a.2 indicators, there is a plan to develop a comprehensive set of harmonization methods to streamline and unify data collection and reporting processes.

- **Simplifying data collection instruments**: Instruments used for data collection should be simplified to make the process more accessible and less burdensome for countries.
- **Developing guidelines for national statistical offices**: To improve the collection of household education expenditures data, guidelines for national statistical offices will be developed. These guidelines will include clear instructions on how to accurately collect and report data on household contributions to education financing.
- **Expanding national education accounts methodology**: The existing guidelines will be simplified, and the methodology for national education accounts will be expanded to provide a more comprehensive and nuanced understanding of education financing.

Country interventions:

The presentation on educational expenditures reveals a spectrum of challenges and suggestions from diverse national perspectives:

Belize pointed out a lack of detail in the metadata of the Education Expenditure Questionnaire, which hampers the country's ability to make accurate estimations. This intervention underscores the need for clearer and more detailed guidelines to aid countries in reporting educational expenditures accurately.

Côte d'Ivoire highlighted the positive impact of international assistance in enhancing national capacities for data collection and reporting on educational expenditures.

Guinea discussed the difficulties in data collection within the Ministry of Education and the National Statistical Institute. This highlights the challenge of inter-institutional collaboration in gathering comprehensive data on educational expenditures.

Jordan raised the issue of data accessibility, distinguishing between open access and restricted access data. This intervention points to the necessity of improving data availability and transparency to enhance the quality of education expenditure reporting.

The Dominican Republic suggested modifications to the national account as a potentially efficient way to address challenges in reporting educational expenditures. This recommendation hints at structural changes to improve data accuracy and completeness.

Spain emphasized the importance of metadata in understanding and comparing educational expenditures. They advocated for a comprehensive mapping of all data sources to address the variety of public expenditures and the relevance of private expenditures.

Switzerland welcomed the suggestion to harmonize expenditure SDG 4 indicators and simplify data collection instruments. They proposed starting with total expenditure queries before requesting detailed breakdowns to increase coverage, particularly for private expenditures.

Mexico advocated for strengthening the national system for data collection, suggesting a focus on improving national capacities and methodologies for comprehensive educational expenditure reporting.

Trinidad and Tobago supported the simplification of the questionnaire and raised concerns about the timing of actual expenditure data availability versus UIS data release, suggesting the possibility of submitting official estimates in October.

South Africa called for transparent definitions of assumptions and sources to resolve issues of conflicting data sources, underscoring the need for clarity in the methodologies used to gather educational expenditure data.

Argentina highlighted the difficulty of reporting expenditures by level due to the federal system, noting that private expenditure data are particularly challenging to collect and often unreliable.

Algeria inquired about the inclusion of out-of-pocket expenses in overall educational expenditures, pointing to the significant contributions of parents to school funding that might not be captured in current reporting frameworks.

Decisions: Education expenditure data

Noting the information presented in the report "Education expenditure data: challenges and solutions forward" (1 UIS/EDS/6); acknowledging the three challenges associated with the calculation of expenditure indicators, namely:

- low coverage, apart from total public expenditure;
- conflicting data sources for public expenditure;
- private expenditure data production,

The UNESCO Conference on Education Data and Statistics:

1. Requests the TCG/EDS commission to focus efforts on:
   (a) creating a menu of harmonization methods of the FFA and SDG 1.a.2 indicators;
   (b) simplifying data collection instruments including prioritization;
   (c) developing and providing guidelines to national statistical offices on how to collect household expenditure on education;
   (d) simplifying guidelines and expanding the national education accounts methodology.

TAKEAWAYS
- Challenges of low coverage for some indicators (particularly private expenditures on education)
  o Data collection problems
  o Low reporting rates
- Conflicting data sources for public expenditures (among other IOs)
- Measurement for private expenditures lacks clarity

Some solutions:
- A menu of harmonization methods
- Simplifying data collection instruments
- Developing guidelines on household expenditure on education
- Expanding national education accounts methodology

DAY 2: 8 FEBRUARY 2024

The second day of the Conference was structured as follows:

- Keynote addresses by Dr. Rukmini Banerji, Chief Executive Officer of Pratham Education Foundation; Dr. Benjamin Piper, Director of Global Education Program, Bill & Melinda Gates Foundation (BMGF); Ms. Epha Ngota, Assistant Director, National Examination Council, Kenya
- Learning assessments and skills survey data: challenges and solutions forward
- Household survey data: challenges and solutions forward
- National SDG 4 benchmarks: challenges and solutions forward
- Integration of statistics
- Provisional agenda and place of the second EDS Conference
- Report of the Conference

Keynote Speaker: Dr. Rukmini Banerji, Chief Executive Officer of Pratham Education Foundation

([Presentation](#))

The keynote speaker, Dr. Rukmini Banerji, provided an overview of the work of Pratham, one of the largest non-governmental organizations in India. She focused on the ASER (Annual Status of Education Report) initiative which has been active in the context of education assessment and improvement since the early 2000s. She traced the evolution of ASER's methodology, its significant impact on education outcomes, and its strategic alignment with both India's national education policies and global educational objectives.

Dr. Banerji highlighted ASER's innovative use of simple tools for measuring learning achievements in language and mathematics. These have been instrumental in making educational outcomes comprehensible to parents and communities. By employing basic literacy and numeracy tests, ASER facilitated the creation of village report cards, effectively showcasing

children's competencies in reading, arithmetic, and school attendance to their local communities.

A pivotal element of ASER's success has been its commitment to community engagement. By presenting clear evidence of learning outcomes and collaborating with parents and local communities, ASER has been addressing educational challenges at the grassroots level.

The initiative's scalability and the breadth of its national reporting were also key points in the presentation. Since its inception in 2005, ASER has expanded its efforts to produce national reports that provide a comprehensive overview of educational attainment across India, thereby fostering a unified understanding among various stakeholders. This effort was further extended to include detailed village report cards at the district level.

Dr. Banerji also discussed ASER's strategic partnerships and its role in expanding educational assessment initiatives across India and beyond, through collaboration with local institutions and participation in South-South initiatives such as ICAN and Uwezo. These partnerships have been crucial in developing internationally comparable assessments aligned with SDG 4.1.1a.

ASER is also aligning with India's National Education Policy (NEP) 2020, particularly in its emphasis on foundational literacy and numeracy (FLN). The introduction of the Performance Assessment, Review, and Analysis of Knowledge for Holistic Development (PARAKH) in 2022, assessed FLN across multiple grades, exemplifying this policy congruence. There is also a broadening of the scope of educational evaluation through recent state-level assessments in mathematics and science that covered 8 million children.

In her concluding remarks, Dr. Banerji reiterated the importance of data-driven approaches and community engagement in understanding and addressing educational challenges. She emphasized ASER's significant impact on education assessment and policymaking, not only in India but also in setting a precedent for global educational initiatives. Through its citizen-led initiatives and collaborations, ASER has been pivotal in promoting the critical importance of foundational learning for children's future success and broader life opportunities, aligning its mission with both national and global educational goals.

Keynote Speaker: Dr. Benjamin Piper, Director of Global Education Program, Bill & Melinda Gates Foundation (BMGF)

([Presentation](#))

Benjamin Piper, Director of Global Education at the BMGF, brought to the forefront the critical importance of early and effective assessment of learning outcomes in primary education. As an education researcher and specialist in learning assessment in East Africa, Dr. Piper shared his experiences and the lessons learned from his work alongside notable figures such as Mr. Zewdu Gebrekidan from Ethiopia and Mr. Mukhtar Ogle from Kenya.

Drawing upon his early days as a graduate student in Ethiopia, Kenya and Uganda, Dr. Piper recounted his initial approach of impart his statistical knowledge to the testing agencies in these countries. He extracted three pivotal lessons about the measurement of learning outcomes: early measurement in primary school and early childhood, measuring well and the immediate actions assessment experts can take to influence educational outcomes positively.

Dr. Piper emphasized the reality faced by many regions where children struggle with basic literacy and numeracy by the end of their primary education and highlighted by the lack of comprehensive and comparable data across countries. Early interventions to counteract the widening educational gaps were essential, and he advocated for evidence-based approaches, such as the science of reading, to improve literacy and numeracy skills effectively.

Dr. Piper pointed out successful educational reforms in various countries, including Brazil, Kenya, Senegal, Tanzania, and India, among others. They serve as beacons of hope and demonstrate the feasibility of significantly improving learning outcomes through well-designed and implemented measures.

He also touched upon the role of the Global Proficiency Framework (GPF) developed by the UIS as an invaluable tool for measuring learning outcomes, highlighting the importance of comparable assessments and the integration of international standards to ensure meaningful and actionable data collection.

Dr. Piper drew parallels between the health and education sectors, stressing the imperative of establishing basic indicators for educational success. He compared these to under-five mortality rates in health.

Dr. Piper called upon Member States and all stakeholders to prioritize the measurement of foundational literacy and numeracy as a critical indicator for educational progress. He urged for pragmatic solutions to overcome data challenges and highlighted the Gates Foundation's readiness to support initiatives aimed at improving learning assessment, particularly in sub-Saharan Africa.

Keynote Speaker: Ms. Ephel Epha Ngota, Assistant Director, Kenyan National Examination Council (KNEC), Kenya

([Presentation](#))

Keynote Speaker Ms. Ephel Epha Ngota illustrated the vital importance of integrating learning assessments to bolster educational outcomes and guide policy-making processes. She provided a comprehensive exploration of the strategic use of learning assessment data, the challenges faced, and the innovative frameworks proposed to monitor and improve learning outcomes. The important question to ask was: how much are children learning? And which children need help?

She emphasized the pivotal role of learning assessment data in informing policy decisions, highlighting their utility in understanding learning quality across various levels of basic education. Such data serve as a critical tool for evaluating the efficacy of educational programmes and interventions, as well as their use for benchmarking purposes. This allows Kenya to gauge its educational standards against those of other nations and identify areas for improvement.

Ms. Ngota stressed the importance of measuring learning outcomes to improve educational quality, calling for educational strategies that champion inclusivity and equity, and integrating technological advancements and 21st-century skills into the curriculum to prepare learners for future challenges.

Ms. Ngota proposed a Monitoring Learner Achievement Framework with five key educational stages, from pre-primary through to senior secondary. This framework uses regional and international benchmarks to gauge performance levels and encourages the implementation of AMPL-ab in partnership with the UIS to generate internationally comparable learning data, including reporting on SDG 4.1.1b. She also proposed the establishment of a dedicated team and technical committee within the Kenya National Examinations Council to spearhead learning assessment efforts.

The keynote speaker further examined strategies for enhancing learning outcomes, emphasizing the importance of classroom learning experiences. Robust data systems can pinpoint learning gaps at the school level. There was a need for low-stakes assessments to provide subject-specific interventions.

However, major challenges included the high costs associated with conducting comprehensive learning assessments and the absence of a centralized repository for assessment data and tools. These issues must be addressed to fully capitalize on the potential of learning assessments in enhancing the quality of Kenya's education.

Ms. Ngota's presentation presented learning assessments as a cornerstone for shaping educational policy and practice in Kenya. In using learning assessment data effectively, there is a substantial opportunity to inform policy interventions more fully for the advancement of a better quality of education, as well adjustment to programmes and targeted support across all levels of education. However, overcoming the financial and logistical obstacles remains critical for the successful execution of these strategies.

Session 7: Learning assessments and skills survey data: challenges and solutions forward

([Presentation](#) / [Official document](#))

The UIS director, Dr. Silvia Montoya, identified the key challenges of Learning Assessments and Skills Survey Data and proposed solutions. Key challenges in the realm of education data collection and assessment included:

- **Coverage gaps**: There is a significant lack of data coverage, especially in the early primary grades, where about 90% of the population is unaccounted for, in stark contrast to the 30-40% data coverage observed at the end of primary and lower secondary levels. Dr. Montoya also noted a skew in the availability of indicators beyond SDG 4.1.1 towards high-income countries, indicating a disparity in data collection efforts.

- **Data collection variability**: Dr. Montoya described the complexities that resulted from the lack of comparability across different educational systems, the diverse methodologies used in data collection, the financial burdens associated with comprehensive assessments and the broad range of topics covered in cross-national questionnaires. Together, these factors contribute to the challenges in using data for SDG 4 indicators effectively.

- **Quality and standardization issues**: Maintaining high standards and quality in assessment logistics to ensure reliable comparability across countries and over time is a critical challenge.

Director Montoya proposed several solutions and developments:

- **Global standards and harmonization**: The introduction of global standard tools and minimum proficiency levels (MPL) for assessments, alongside initiatives like AMPL (Assessments for Minimum Proficiency Levels) in countries such as Kenya and Zambia, aimed at measuring learning losses.

- **Rosetta Stone tool**: This concordance tool is designed to bridge the gap between international and regional assessments, facilitating the alignment of MPL with national standards.

- **Capacity development tools**: Efforts to provide alternatives for reporting and tools for policy comparison and linking were a means to enhancing the data collection and reporting processes.

Dr. Montoya outlined a future agenda to address these challenges:

- **Assessment harmonization and reporting handbook**: The handbook would bring together essential information for reporting, including eligibility criteria.

- An **assessment accreditation system:** A certification process to ensure compliance with assessment eligibility criteria, aimed at standardizing data collection and reporting practices, based on the handbook.
- **Increased investment in learning assessments**: Strategies to develop national infrastructure, transfer knowledge and skills, and empower decision-making to improve assessment coverage and quality.
- **Harmonization of context questionnaires**: Standardization of key definitions and formats to capture student, teacher, and school data for greater comparability across different educational contexts.
- **Innovative approaches to coverage**: Exploration of cost-effective methods, such as Mini LAMP for adult literacy measurement and other strategies for hard-to-measure indicators.

Dr. Montoya's illustrated the critical role of learning assessments in shaping educational policy and practice globally. There is a pathway forward to achieving more accurate, comprehensive, and comparable education data, pivotal for informing policy decisions and meeting global educational objectives by addressing these challenges and implementing the proposed solutions.

Country interventions:

Below is a review of each country's intervention about learning assessments:

CONFEMEN highlighted its role in contributing to the dynamic of learning assessments through programmes like PASEC or SAQMEC. Many countries struggle in introducing data and assessments. CONFEMEN's efforts aim to harmonize learning assessments at a global level.

Côte D'Ivoire discussed its involvement in international assessments such as TIMSS and PISA, and the challenge of funding them. The need for donor support and cooperation between countries was essential.

Guinea stressed the need for capacity building in learning assessments data. The intervention highlighted the high costs associated with PASEC and the need for substantial support to develop a comparable methodology.

Finland expressed support for improving comparability in learning assessments and emphasized the use of this data for policymaking, specifically in supporting teachers.

Argentina discussed the technical procedures involved in national evaluations and the need for harmonization with the national curriculum. It also highlighted the importance of using learning assessment results to support teachers and improve classroom practices.

India raised concerns about the downgrading of the SDG 4.1.1a indicator and stressed the importance of early childhood education. National-level assessments should be comparable and should not be downgraded.

Indonesia shared its approach to providing learning assessment data to schools for planning purposes, covering literacy, numeracy, and the school climate.

Jordan highlighted learning assessment as a crucial source of information for examining perceptions and skills, calling for data visualization tools to help interpret data at the school level without overwhelming stakeholders.

Nigeria shared its experience of participating in PASEC for the first time and solicited the assistance of the UIS in maximizing the benefits of regional assessments.

Curacao discussed the challenges of assessing learning in a multilingual context and the need for technical support to accommodate multilingualism in assessments.

Paraguay emphasized the need to foster a culture of information within educational institutions, helping professionals and teachers to analyse evaluations meaningfully.

Bangladesh highlighted notable discrepancies between school-based assessments by the Ministry of Education and household-based assessments by the National Statistics Office. These assessment methods should be harmonized to ensure consistent and reliable educational measurements.

Nicaragua noted that evaluating learning outcomes required significant investment, such as textbooks and teacher training. They suggested reaching a consensus on how countries with

substantial needs could improve each other's competencies. They also questioned how to reverse the existing deficit to ensure sufficient budget allocation for such assessments.

Malawi pointed out the need to focus not only on learners but also on the quality of teachers. The country participated in both national and regional assessments like SACMEQ but faced challenges in performance.

Morocco wanted to align national assessments with global standards but would need UIS support to address the inadequate quality of education. It showcased an ambitious strategy to improve fundamental skills among students.

Nicaragua discussed the investments required to evaluate learning outcomes effectively, suggesting the need for a consensus on how resource-constrained countries can enhance competencies.

Portugal highlighted the significant impact that returning collected data to schools could have, noting the impressive outcomes that could be achieved through this approach.

Somalia discussed the need to describe the quality of learning and shared its experience in collecting assessments on early grade reading and mathematics. As a fragile country, Somalia was beginning to reveal the results of these assessments. The focus was on prioritizing interventions, not just assessments, especially when gaps in curriculum competency were identified.

Tunisia pointed out a major issue with calculating indicator SDG 4.1.1 due to not participating in recent editions of international assessments such as PISA and TIMSS. It called for greater regional efforts to analyse and support countries in these assessments.

The United States of America discussed its global support for instructional learning and requested an extension of the interim reporting for indicator SDG 4.1.1.a. This would allow more time for countries to make their data comparable and improve the quality of their reporting.

Nigeria commented on the importance of children's learning assessments for systematizing quality education. The country questioned how to bridge the gap between high-level discussions

and grassroots assessments. Nigeria also enquired about an international framework for testing teacher competency.

These interventions collectively emphasize the global commitment countries had to enhancing learning assessments, the challenges of standardization, the need for capacity building and the crucial role of international support, both financial and logistical, in achieving educational goals.

Decisions: Learning assessments and skills survey data

Noting the information presented in the report "Learning assessments and skills survey data: challenges and solutions forward" (1 UIS/EDS/7); welcoming the significant progress made in establishing conceptual, methodological, and reporting frameworks for SDG indicator 4.1.1; acknowledging the remaining challenges in reporting SDG indicator 4.1.1; noting the low coverage and remaining challenges for SDG indicators 4.6.1, 4.7.4 and 4.7.5:

The UNESCO Conference on Education Data and Statistics:

1. Requests the TCG/EDS Commission to focus efforts on:
   (a) an assessment harmonization and reporting handbook
   (b) an assessment accreditation system
   (c) the standardization of context questionnaires in learning assessments
   (d) innovative methodologies on indicators with low coverage

2. Invites the international community to develop an approach to increase investment to fund learning assessments.

TAKEAWAYS

Challenges include coverage gaps, data collection variability, quality, and standardization

Solutions:
- Global standards and harmonization

- Capacity development tools

Future agenda:
- Assessment harmonization and reporting handbook
- Assessment accreditation system
- Harmonization of context questionnaires
- Innovative approaches to coverage

Session 8: Household survey data: challenges and solutions forward

([Presentation](#) / [Official document](#))

Ms. Betina Fresneda, vice-chair of the Bureau of the Conference and a representative from IBGE Bazil, outlined the role of household surveys in monitoring SDG 4, presenting the benefits, challenges encountered and proposed strategic solutions for using household surveys to collect education-related data effectively.

The advantages of household surveys were:

- **Disaggregation of data**: Household surveys offer nuanced insights by allowing for the disaggregation of data. This is crucial for uncovering inequities in educational access and outcomes across different demographics.
- **Consistency and representativeness**: Household surveys are crafted to be both consistent over time and representative of various populations, providing a dependable overview of the educational landscape across diverse groups.

The limitations and challenges of household surveys were:

- **Cost and comparability issues**: Despite their significant advantages, household surveys come with high costs and face challenges in comparability due to the lack of standardized instruments to measuring literacy.
- **Limited indicators for adult education**: There is a critical gap in indicators for adult education participation. This is challenging for the assessment of lifelong learning opportunities and outcomes comprehensively.

Ms. Fresneda reviewed existing survey tools, such as population censuses, the demographic and health surveys (DHS), multiple indicator cluster surveys (MICS), and labour force surveys. These tools can produce 17 indicators relevant to SDG 4, covering both global and thematic aspects of education.

The proposed solutions for overcoming challenges include:

- **Standardization of survey items**: A key proposal is the standardization of survey items to establish a common framework for data collection and processing. This will improve consistency and comparability across studies.
- **Comprehensive guidelines**: The development of comprehensive guidelines will aid researchers and statisticians in navigating the complexities of data collection, processing, and analysis.
- **Balance between data accessibility and security**: Mechanisms must be developed that will ensure data accessibility for research and policymaking while protecting sensitive information.
- **Standardized definitions and measures**: There must be standardized definitions and measures for key variables, such as household wealth, migration status and disability. This will ensure data reliability and concerns regarding respect for privacy.
- **Raising awareness:** Enhance awareness among stakeholders about the potential of surveys to generate valuable educational statistics will encourage a more data-informed approach to education policy and practice.

Ms. Fresneda highlighted the critical role of household surveys in shaping educational policy and practice through the insights they offer into educational trends, disparities, and outcomes in populations. By addressing the challenges of cost, comparability, and indicator limitations, and implementing the proposed solutions for standardization and awareness-raising, there is a significant opportunity to leverage household surveys to drive improvements in the education sector.

Country interventions:

Below is a more detailed elaboration of the interventions by country and partners:

Representing Education Cannot Wait, Christian Stoff intervened within the realm of education in emergencies (EiE). He presented several pivotal points to bolster the efficacy and reach of EiE data. There is a need for a united front, advocating for the commitment to and collaboration on standardized EiE data among governments and various partners. This collaborative effort could be significantly bolstered through networks such as the International Network for Education in Emergencies (INEE), which plays a critical role in fostering global cooperation in this field.

Mr. Stoff also highlighted the critical importance of leveraging diverse data sources. By doing so, stakeholders can gain a more nuanced understanding of how crises affect educational landscapes, thereby enabling more effective interventions. He called for the development of inter-operable data systems which are equipped with shared protocols and standards and are essential for managing crisis-related data efficiently, ensuring that information can be easily shared and utilized across different platforms and by various stakeholders.

To support these initiatives, Mr. Stoff proposed the establishment of mechanisms to aid countries in strengthening their EiE data collection and standardization processes. This would not only improve data quality but also enhance the global community's ability to respond to educational disruptions caused by crises. He advocated for tailored global reporting on the educational situations in crisis-affected countries. This approach would help in highlighting specific needs and challenges, thereby facilitating targeted support and interventions.

Mari Yasunaga from UNESCO's Inclusive Policy Lab highlighted the urgent need for better data collection and reporting on adult learning and education (ALE) to meet SDG 4. Only 64% of countries have shown progress in ALE monitoring and evaluation, indicating a global shortfall in high-quality ALE data, partly attributed to inadequate public investment. The complexity of ALE, spanning formal, non-formal and informal settings, poses significant challenges to data collection, further complicated by the discrepancies between self-reported and directly measured literacy skills.

Ms. Yasunaga advocated for adopting comprehensive frameworks like the Marrakech Framework for Action and leveraging initiatives such as the OECD's Programme for the International Assessment of Adult Competencies (PIAAC) to improve the quality of ALE data by

directly assessing adult competencies. She emphasized the importance of using ALE data effectively to inform policymaking, enhance educational programmes and support key initiatives, including the European Year of Skills.

There is a shift towards directly measuring ALE outcomes to better understand various learning pathways and their socio-economic impacts. Ms. called for the development of tools that are adaptable to the evolving needs and modalities of adult learning and to ensure inclusivity in education policies and interventions.

Diane Richler, the former Chair of the IDA Inclusion Working Group, delivered a presentation on improving data collection methodologies for children with disabilities. Central to her discussion was the introduction of the Child-Functional Module, an innovative tool specifically designed to gather data on children with disabilities. By December 2023, this module had been utilized by 80 countries, providing valuable data on the conditions and needs of children with disabilities across the globe.

Recognizing the importance of teacher insights in this process, a version of the module has been tailored for educators. This adaptation aims to deepen the understanding of children's abilities and challenges within educational settings, enhancing the quality of data collected.

In a significant collaborative effort, UNICEF and the Washington Group are preparing to launch this tool in June 2024. This initiative represents a pivotal step towards more inclusive data collection practices. The introduction and widespread adoption of the Child-Functional Module are expected to dramatically improve the representation of children with disabilities in education data. Such advancements are crucial for developing policies and programmes that effectively address the diverse needs of all students, ensuring that educational opportunities are equitable and accessible to children with disabilities.

The representative of Germany highlighted a need for careful selection and inclusion of questions in household surveys that accurately reflect education indicators.

The Côte D'Ivoire delegation expressed a need for support from the International Institute for Educational Planning (IIEP), indicating a desire for assistance in strengthening their education data collection and analysis capabilities.

The Dominican Republic discussed how private expenditure on education could be addressed in different ways, suggesting variability and potential inconsistency in how education expenditures are captured in household surveys.

Burundi emphasized the need for household surveys to cover a broader range of indicators, to more fully capture the multifaceted nature of educational progress and challenges.

Cambodia highlighted their approach to conducting household income and expenditure surveys every two years to measure poverty levels. They recommended working closely with national statistics offices (NSO) and the UNESCO office, suggesting a collaborative approach to enhance the quality and utility of education data.

Haiti pointed out that some indicators cannot be calculated from household surveys and called for UIS support in this area, indicating gaps in their current data collection framework that require external expertise and assistance.

Morocco mentioned the need for technical expertise due to the complexity of modelling household survey data. They advocated for starting with fewer variables to manage the technical demands effectively.

Ecuador discussed the use of household surveys for employment data, noting that it does not always provide reliable information. This implies a broader issue with the reliability and applicability of household survey data across different sectors.

Ireland raised concerns about the reliability of census data and suggested that administrative data might provide a more complete picture. They highlighted the importance of response rates and national legislation in ensuring the effectiveness of household surveys.

Lebanon emphasized the importance of investing in surveys to produce comprehensive education data, including integrating refugee data. They noted inconsistencies between data

across agencies, highlighting the challenges of data integration and representation for displaced populations.

Peru shared their experience of conducting a special household survey, utilizing a mix of online and in-person methods to gather data. This approach suggests a flexible methodology to overcome challenges posed by the pandemic and other logistical constraints.

Portugal discussed the alignment of household survey variables with SDG 4 indicators and the challenges of matching survey timelines with the school year. They noted the limitation of household surveys in covering child-related indicators, as they primarily focus on the adult population.

Sweden raised the issue of declining response rates in household surveys, suggesting that regional surveys might offer a solution. They also mentioned the importance of including reference dates in metadata to improve the utility of collected data.

Switzerland highlighted the burden that household surveys place on respondents and the need to limit data collection to prevent confusion and ensure the quality of the data collected.

Tunisia discussed the challenge of harmonizing definitions for non-formal education and the importance of having several data sources to provide a comprehensive view of the educational landscape.

Spain noted that regular surveys collect household expenditure data but not specifically on education, indicating a gap in capturing education-related financial contributions at the household level.

Decisions: Household survey data

Noting the information presented in the report "Household survey data: challenges and solutions forward" (1 UIS/EDS/8); acknowledging the importance of exploring the full potential of household and other surveys and censuses as a source of data to monitor SDG 4; noting the challenges associated with the use of survey data including:

- non-harmonized survey instruments;
- different reference periods;
- quality and comparability of background information;
- comparability issues with measuring literacy, knowledge, and skills;
- inaccuracy in collection of household education expenditure; and
- availability and accessibility of survey data,

The UNESCO Conference on Education Data and Statistics:

1. Requests the TCG/EDS Commission to focus efforts on:
   (a) raising awareness of the opportunities that surveys offer for generating education statistics;
   (b) establishing a standardized set of modular survey items;
   (c) issuing guidelines for data collection and processing;
   (d) developing standardized definitions and measures for factors such as household wealth, migration, and disability, notably facilitating the integration of recently developed data collection tools aligned with a more comprehensive concept of disability into large-scale surveys;
   (e) ensuring accessibility while maintaining data security.

TAKEAWAYS
Advantages of household surveys:
- Disaggregation of data
- Consistency and representativeness

Challenges:
- Cost and comparability
- Limited indicators for adult education

Proposed solutions:
- Standards and guidelines for data processing
- Standardized survey items, definitions, and measures

Session 9: National SDG 4 benchmarks: challenges and solutions forward

([Presentation](#) / [Official document](#))

Dr. Silvia Montoya, the director of the UIS described the use of national SDG 4 benchmarks, focusing on the benchmark indicators, their coverage and the challenges faced in their implementation.

There were several positive points:

- 70% of countries have submitted at least one benchmark, indicating a substantial global engagement with the SDG 4 monitoring framework,
- the above point demonstrates the international community's commitment to tracking progress towards ensuring inclusive and equitable quality education for all by 2030.

However, there are also several challenges:

- missing benchmarks
- the quality of targets defined by countries, and
- the efficacy of monitoring progress towards these targets.

These challenges are critical because they directly impact the ability to measure improvements in education and identify areas requiring more focused interventions.

To address these issues, Dr. Montoya proposed a multi-faceted approach:

- engaging with Member States through a sustained communication campaign to increase awareness and understanding of the importance of setting realistic and policy-relevant benchmarks;

- introducing an assessment process to evaluate the benchmarks' effectiveness and their alignment with the national education goals. Linking the benchmarks to national plans and targets is crucial for ensuring that the efforts to achieve SDG 4 are integrated into broader national development strategies, thereby increasing their impact.

- The benchmarking process itself, initiated shortly after the adoption of the SDG 4 monitoring framework by the UN General Assembly in 2017, has seen several key milestones: the endorsement of seven SDG 4 indicators in August 2019, which were selected based on their relevance, clarity in historical trends or clear targets and policy relevance.

- the invitation to countries in 2021 to submit national benchmark values for 2025 and 2030, following the Global Education Meeting declaration.

- continued engagement in 2022, with invitations for new submissions or revisions of benchmarks, and the recognition of the benchmarking process's importance by the UN Secretary-General, emphasizing the ongoing commitment to refine and enhance the monitoring of educational progress globally.

- addition of an eighth benchmark indicator on school Internet connectivity in 2023, along with ongoing work on greening education and youth participation indicators. What constitutes quality education in the digital age is constantly evolving.

These efforts aim to ensure that the benchmarking process remains relevant and capable of addressing contemporary challenges in education, such as digital transformation and sustainability.

Country interventions:

Below is a review of the points raised by each country:

Egypt expressed gratitude to the UIS director for providing solutions to challenges in benchmarking and data collection.

France emphasized the relevance of the SDG 4 benchmarking process, highlighting the necessity of linking targets to monitoring mechanisms. They pointed out gaps in non-formal participation and suggested harmonizing variations in indicators.

The Dominican Republic stressed that a budget without a plan is ineffective, criticizing the insufficient effort by international organizations to strengthen the link between budget allocation and SDG 4 targets. They advocated for integrating annual budget plans with specific SDG 4 goals.

Haiti highlighted the difficulties in calculating the rate of out-of-school children without demographic details from a census and noted inconsistencies between school and survey data.

Trinidad and Tobago requested clarification on graduation rates and planned to critically review national plans considering the benchmarks.

Côte D'Ivoire raised questions about the relevance of internet connectivity indicators when linked with school curricula.

The African Union expressed interest in the benchmarking process, emphasizing the need for continued assistance for the AU.

Somalia discussed the challenges related to surveys and the definition of population estimates affecting the benchmarking process due to the lack of age disaggregation.

Sweden sought clarification on SDG 4 benchmarks, noting that they decided to use European Union benchmarks instead.

A UNESCO colleague addressed the urgent need for data in early childhood education and the low reporting coverage for pre-primary benchmarks. They questioned if the current indicator SDG 4.2 sufficiently captures early childhood education and called for harmonization and capacity building to improve data production.

Argentina discussed difficulties related to defining targets and the discrepancy between statistical projections and policy targets, suggesting that the target definition should be a collective deliberation to guide management effectively.

These interventions collectively demonstrate the complexities and varied challenges countries face in implementing and monitoring SDG 4 benchmarks. They highlight the need for clarity, harmonization, and international support to effectively link educational planning with SDG 4 targets and improve data collection and reporting mechanisms.

Decisions: National SDG 4 benchmarks

Noting the information presented in the report "National SDG 4 benchmarks: Challenges and ways forward" (1 UIS/EDS/9); welcoming the efforts of Member States to fulfil the commitment they made in 2015 to set SDG 4 benchmarks; acknowledging the release of the second SDG 4 Scorecard that monitors progress towards the national SDG 4 benchmarks; noting the decision of the SDG 4 High-level Steering Committee to have three additional benchmark indicators developed to reflect the priorities of the Transforming Education Summit:

The UNESCO Conference on Education Data and Statistics:

1. Invites Member States to complete submission of national benchmarks, especially on the equity indicator, and to include them consistently in national sector plan, regional dialogue, and global cooperation processes;

2. Invites the UIS to strengthen its efforts to improve the quality of the benchmark database;

3. Invites the UIS and the GEM Report to propose a mechanism enabling countries to seek clarifications and propose corrections to the SDG 4 Scorecard assessment;

4. Requests the TCG/EDS Commission to:

(a) refine and approve the proposed SDG 4 Scorecard review mechanism.

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│                              TAKEAWAYS                                    │
│ Challenges to establishing national benchmarks:                          │
│        -    Missing benchmarks                                           │
│        -    Quality of targets defined by countries                     │
│        -    Efficacy of monitoring progress                             │
│                                                                          │
│ Potential solutions                                                      │
│        -    Sustained communications campaign with Member States to highlight importance of │
│             submitting benchmarks and including them in national plans  │
│        -    Improved quality of benchmarks database                     │
│        -    Refinement of SDG 4 Scorecard review mechanism              │
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Session 10: Integration of statistics

([Presentation](#) / [Official document](#))

The presentation of Manos Antoninis focused on the challenges and strategies for integrating diverse education data sources to produce reliable SDG 4 indicators.

Challenges:

- a need to harmonize different methodologies

Strategies:

- adopting best practices from sectors such as child malnutrition and mortality, where joint interagency groups have successfully integrated data.
- developing models that combine different data sources,
- ensuring active engagement from countries in the data estimation process,
- formalizing data reporting practices
- establish country ownership of education data
- develop joint models for key indicators such as out-of-school rates and completion rates.

Country interventions:

Below are the interventions from various countries and organizations:

Côte d'Ivoire emphasized the importance of completion rates within their educational monitoring efforts, acknowledging challenges in data regularity and biases introduced by head-of-household responses in household surveys. They expressed commitment to improving these metrics and welcomed methodologies from international organizations to better reflect their educational progress.

Germany raised concerns about capturing out-of-school rates and completion rates at the upper secondary level, noting difficulties for students in programmes that extend their education. There was a need for methodologies that accurately reflect these situations.

India echoed Germany's concerns and highlighted challenges in assessing out-of-school rates through surveys, which may overestimate figures by not distinguishing between formal education and other forms of learning. India advocates for allowing countries to decide how to report, whether through administrative data or household surveys.

Luxembourg discussed the unique situation of children living in Luxembourg but attending school in neighbouring countries, creating complexities in counting completion rates, and integrating datasets across borders. They highlighted the need for data merging to accurately reflect student populations.

Korea pointed out the legal obstacles that prevent the integration of multiple data sources, emphasizing that while the goal of data integration is clear, legal frameworks currently hinder such efforts.

The IIEP representative highlighted three main points:

- the capacity limitations of Ministries of Education in integrating data,
- the importance of inter-operability between national and public surveys, and
- the need for good governance to effectively integrate multiple sources of data. Latvia was cited as an example of effective governance and technology use.

The IIEP further expanded on the importance of strong information systems and data architecture at both national and international levels, emphasizing the need for EMIS

transformation through digitalization and inter-operability standards to modernize educational monitoring systems.

Mr. Antoninis addressed the legal challenges mentioned by Korea, suggesting a focus on linking aggregate sources to analyse common trends.

Decisions: Integration of statistics

Noting the information presented in the report "Integration of statistics: challenges and solution forward" (1 UIS/EDS/10); acknowledging that multiple sources of data are a growing area of interest in education statistics, which presents opportunities and challenges; noting the initiatives that have recently been taken to use multiple sources and prepare estimation models on out-of-school and completion rates:

The UNESCO Conference on Education Data and Statistics:

1. Requests the TCG/EDS Commission to focus efforts on:
   (a) formalizing good practice for reporting estimates, for instance adapting the WHO GATHER checklist on health to education statistics;

2. Invites the UIS and the GEM Report to:
   (a) support country participation through a mechanism to address country queries and suggestions;
   (b) propose a joint model of out-of-school and completion rates, also taking into account the need to address the implications for crisis-affected populations;
   (c) propose a prioritization of other indicators that might benefit from development of estimation models that rely on multiple data sources.

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TAKEAWAYS
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Challenges to the integration of statistics:
- a need to harmonize different methodologies

Strategies:
- adopting best practices from sectors such as child malnutrition and mortality, where joint interagency groups have successfully integrated data
- developing models that combine different data sources
- ensuring active engagement from countries in the data estimation process
- formalizing data reporting practices
- establishing country ownership of education data
- expanding joint models for key indicators such as out-of-school rates and completion rates

DAY 3: 9 FEBRUARY 2024

The third day of the Conference proceeded as follows:

- Keynote address by H.E. Professor Mohammed Belhocine, Commissioner for Education, Science, Technology, and Innovation (ESTI), African Union Commission
- Panel on regional organizations and education monitoring
- Panel on United Nations organizations and education monitoring
- Two panels on the role of technology in education data production
- Education data: challenges and solutions forward

Keynote Speaker: H.E. Professor Mohammed Belhocine, Commissioner for Education, Science, Technology, and Innovation (ESTI), African Union Commission

Professor Mohammed Belhocine focused on several key themes centred around education, development, and the utilization of data for human advancement. He highlighted the importance of education in human development and the critical role of historical data in identifying and addressing gaps. He emphasized the need for global cooperation, which is not always synchronized, as well as considering each country's specific requirements.

Both social and technical subsystems (including IT) are essential in the development of education and human resource systems. The social system, which encompasses administration and governance structures, needs substantial investment. While technological systems can be more straightforward to manage, developing social systems requires more resources, including efforts to change mindsets and increase engagement among stakeholders.

A central theme was the significance of Civil Registration and Vital Statistics (CRVS) systems. Correctly recording CRVS data, such as births and deaths, is crucial for calculating key health indicators and estimating the number of children requiring schooling. This, in turn, aids in making policy-making more systematic and planning more feasible. Understanding the causes of death can inform prevention plans and measures, highlighting the need for timely and quality evidence to make effective interventions.

Professor Belhocine also touched upon the impact of vaccination campaigns against various diseases, advocating for a more sustained impact through coordinated efforts. He stressed the importance of information systems for timely data and evidence, indicating that without a capable social system, technological systems alone are insufficient, as they require quality data sharing and compilation.

There is a need for strong advocacy and capacity building to develop robust systems to provide the data and information necessary for monitoring. There are potential challenges in assessing teachers directly, as assessments should aim to improve skills and capabilities rather than assign blame.

To make data understandable to various audiences, Prof. Belhocine proposed the creation of dashboards and shared his insights into the African Union's efforts in improving education. The AU has established a framework with definite targets and Key Performance Indicators (KPIs) to help countries focus on national priorities and monitor progress at both national and regional levels. This collaborative effort involves working with various agencies to ensure data availability for monitoring progress against SDG 4 targets and goals.

Professor Belhocine concluded by discussing efforts to improve reading, mathematics and science skills across countries, the use of AMPL tools to fill data gaps in learning and the

alignment of the Education Management Information System (EMIS) with national education systems and policies. He called for coordinated efforts among UN agencies and development partners to enhance the effectiveness of data systems for planning and decision-making in education.

Session 11: Regional organizations and education monitoring

([Official document](#))

The session on "Regional organizations and education monitoring" highlighted the collaborative efforts of international agencies and regional organizations in supporting Member States to improve their education data systems.

Below, is a summary of each speaker's contributions:

ADEA: Albert Nsengiyumva, Executive secretary, Association for the Development of Education in Africa (ADEA)

Albert Nsengiyumva emphasized the critical role of country ownership and engagement in the development of Education Management Information Systems. Mr. Nsengiyumva's approach, leveraging technology to bridge data gaps and improve data comparability across the continent, reflects a strategic focus on strengthening the capacity of African countries to manage and utilize education data effectively. By organizing EMIS peer review mechanisms and conferences, ADEA fosters a collaborative environment for sharing best practices and challenges, which is vital for regional development and achieving educational targets. ADEA's efforts align with broader objectives to enhance the quality and accessibility of education data, facilitating informed decision-making at both national and regional levels.

CARICOM: Helen Royer, Director, Human and Social Development, CARICOM

Helen Royer, speaking on behalf of the Caribbean Community (CARICOM) highlighted the commitment of CARICOM to developing education sector strategies and aligning national plans with SDG goals. CARICOM's establishment of an education planning group to coordinate data production and reporting underscores the importance of a cohesive approach to education

monitoring. The organization's support from various political levels and the development of tools and matrices for data compilation are crucial for advancing education outcomes across the Caribbean. CARICOM's work exemplifies how regional organizations can play a pivotal role in supporting Member States to achieve educational excellence through strategic planning and data-driven decision-making.

ECLAC: Rolando Ocampo, Chief of the Statistics Division at ECLAC

The Economic Commission for Latin America and the Caribbean (ECLAC) was represented by Rolando Ocampo, who discussed the commission's role in providing methodological support and facilitating the production of comparable data across economic, social, and educational domains. ECLAC's collaboration with UN agencies and its efforts to produce indicators for SDGs highlight the importance of inter-agency cooperation in achieving global education targets. The commission's work in supporting Member States through capacity-building initiatives and the dissemination of methodological tools is fundamental to enhancing the quality and comparability of education data in the region.

ESCAP: Arman Bidarbakht-Nia, Head, Statistical Data Management Unit, Statistics Division, ESCAP

Arman Bidarbakht-Nia of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), focused on the effective use of indicators and the development of national monitoring frameworks. The commitment to ensuring that every policy is aligned with the principle of "leaving no one behind" is central to UNESCAP's strategy. By developing national SDG trackers and promoting benchmarking, UNESCAP supports member countries in utilizing data for policymaking and reporting at both national and international levels. This approach is instrumental in advancing education goals by ensuring that policies are informed by reliable and relevant data.

SPC: Tawaqa Naisoro, Education Data Team Leader, the Pacific Community (SPC)

The Pacific Community (SPC), represented by Tawaqa Naisoro, provides targeted support to Pacific countries in developing their EMIS and enhancing education statistics capabilities. By

mobilizing resources and offering capacity-building opportunities, the SPC addresses the unique challenges faced by small island states in the Pacific. The organization's close collaboration with UIS and its involvement in questionnaire review processes exemplify the collaborative efforts required to improve education data quality and use in the region.

European Commission: Stefaan Hermans, Director for Policy and Evaluation, DG Education, Youth, Sport and Culture, European Commission

Stefaan Hermans confirmed the EU's commitment to monitoring and achieving educational targets focused on the integration of SDG indicators within the European education framework. The emphasis on quality data, annual reporting, and collaboration with the OECD and UIS reflects a comprehensive approach to education monitoring. The European Union's efforts to support Member States in improving learning outcomes and advancing education systems through data-driven policies contribute significantly to the collective pursuit of SDG 4.

GPE: Nidhi Khattri, Manager, Results and Performance, Global Partnership for Education (GPE)

The Global Partnership for Education (GPE), represented by Nidhi Khattri, plays a crucial role in supporting countries to develop their education data systems and monitoring capabilities. GPE's focus on linking grants to data initiatives and capacity development underscores the importance of robust data systems for effective education planning and implementation. By integrating SDG 4 indicators into its framework and prioritizing data support, the GPE facilitates progress towards education targets, highlighting the critical role of international partnerships in advancing global education agendas.

Moderator's commentary and synthesis

Lily Neyestani Hailu, Chief of Section for SDG 4 Leadership, UNESCO, synthesized these contributions emphasizing the collective effort required to enhance education data systems worldwide. Country ownership, the need for harmonized methodologies and the importance of capacity-building and collaboration across stakeholders reflect a shared understanding of the challenges and opportunities in achieving SDG 4. The session highlighted the diverse approaches

and shared goals of regional and international organizations in supporting Member States to improve education outcomes through better data collection, analysis, and utilization.

Session 12: UN organizations and education monitoring

([Official document](#))

The session on United Nations organizations and education monitoring, moderated by Manos Antoninis, Director, GEMR, provided insights into the collaborative and individual efforts of various UN agencies to address challenges in the collection, harmonization, and utilization of education data in the path to achieving the SDGs, particularly SDG 4 on quality education.

Below, are summarized the presentations and interventions made by each speaker/institution:

ILO: Rafael Diez de Medina, Director, Department of Statistics and Chief Statistician, International Labour Office (ILO)

Rafael Diez de Medinastated that the key to improving the comparability of labour force survey questions, particularly those measuring the percentage of adults in education and training, lies in harmonizing data collection frameworks. He highlighted the collaboration between the International Labour Organization (ILO) and the UNESCO Institute for Statistics (UIS) on sharing microdata for an SDG 4 indicator as a crucial step forward. Celebrating its centenary, the ILO emphasized the importance of tripartite collaboration (among countries, labour organizations and itself) and the role of the International Conference of Labour Statisticians (ICLS) in standardizing labour statistics. This approach, coupled with efforts to engage regional statistical agencies and build a strong community of practice, is pivotal for enhancing the quality and comparability of education and labour market data globally.

UNICEF: João Pedro Azevedo, Chief Statistician, UNICEF

João Pedro Azevedo shared insights on the extensive journey to refine early childhood development (ECD) measurement, particularly through the development of the ECDI 2030 framework. The process involved consolidating consensus among over 300 ECD tools, integrating ECD indicators into household surveys and leveraging the MICS module for data collection to

enhance country reporting capabilities. These steps demonstrate UNICEF's commitment to improving early childhood education through better data utilization and policy advocacy, reflecting a broader effort to support the goals of SDG 4.2 by providing reliable measures of school preparedness and early development.

IMF: Osawa Naoto, Senior Economist, Government Finance Division, International Monetary Fund (IMF)

Osawa Naoto outlined the IMF's recent mandate to exclusively report on the share of education in total public expenditure, a task previously divided among three UN agencies. He acknowledged the IMF's historical focus on richer nations and detailed plans to broaden data collection efforts, particularly in low and middle-income countries. This includes enhancing the Government Finance Statistics (GFS) framework, standardizing national accounts methodologies, and improving the collection of government revenue and expenditure data. The IMF is also committed to supporting countries with federal structures for gathering data at subnational levels. He emphasized the importance of consolidating data to overcome the challenges of harmonizing education financing data across diverse administrative systems.

ITU: Martin Schaaper, Senior ICT Analyst, ICT Data and Analytics Division, International Telecommunication Union (ITU)

Martin Schaaper highlighted the collaborative efforts between ITU and UNICEF, notably through the Giga project, aimed at connecting all schools to the internet. This initiative involves mapping school internet connectivity and infrastructure by partnering with ministries of education, ICT, and the private sector. Mr. Schaaper pointed out the unique data collection methods of ITU, which gathers data on school connectivity directly from internet providers, contrasting with UNESCO's approach of collecting data from schools. He emphasized the potential for enhanced collaboration between ITU and UNESCO to improve the measurement of school connectivity, addressing the challenges of collecting comprehensive data on internet quality and ICT usage in education. This collaboration could lead to the refinement of existing ICT skills indicators and methodologies, leveraging data from both household surveys and direct provider inputs for a more holistic understanding of ICT in education.

UNDP: Yanchun Zhang, Chief Statistician, United Nations Development Programme (UNDP)

Yanchun Zhang discussed the Human Development Index (HDI) as a comprehensive tool for measuring development progress beyond mere income levels. She emphasized the HDI's inclusion of education-related indicators and the UNDP's role as a primary data user dependent on inputs from other UN agencies. Ms. Zhang highlighted the ongoing efforts to refine these education indicators, with a particular focus on incorporating metrics related to higher education and the overall quality of education. She addressed the constraints faced due to data gaps, especially in least developed countries (LDCs) and the Pacific region and outlined the UNDP's facilitating role in enhancing data collection and quality across countries. This initiative underlines the potential for improving the informational value of the education components within the HDI to better reflect the multifaceted nature of human development.

Moderator's insights

The moderator, Manos Antoninis emphasized the varied approaches of the UN agencies in compiling education sector data and the common challenges faced in ensuring data quality and comparability and their relevance for policymaking. The importance of harmonizing education variables and improving the reporting of non-formal education and training was discussed, with a focus on the need for consensus on educational modules that align with SDG 4 indicators. Agencies emphasized the critical role of capacity development, methodological standardization, and the need for strong partnerships and community practice in overcoming these challenges.

Each agency's efforts to address specific aspects of education data – from early childhood development and labour market outcomes to government financing for education and ICT in schools – reflect a comprehensive and collaborative approach towards improving education outcomes globally. The discussions highlighted the importance of inter-agency cooperation, the harmonization of data collection methodologies, and the use of data to inform policy decisions, emphasizing the collective commitment to achieving SDG 4.

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TAKEAWAYS
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Challenges for UN organizations and monitoring:
- harmonizing education variables
- improving reporting of non-formal education and training
- focus on need for consensus on educational modules aligning with SDG 4 indicators
- critical role of capacity development, methodological standardization
- need for strong partnerships and community practice

Strategies:
- Inter-agency cooperation
- Harmonization of data collection methodologies
- Use of data to inform policy decisions

Session 13a: Role of technology in education data production

([Official document](#))

The third day of the Conference provided insight into the transformative role of technology in education data production. This session, moderated by Borhene Chakroun, Director of Policies and Lifelong Learning Systems Division, UNESCO, described how various organizations and countries are harnessing technological advancements to improve the quality, accessibility, and relevance of education data. This is crucial for monitoring progress towards SDG 4. The discussions centred around the opportunities presented by technology, alongside the challenges and ethical considerations that come with its use, especially concerning big data in education statistics.

OECD PISA: Andreas Schleicher, Director, Directorate for Education and Skills, OECD ([Presentation](#))

Andreas Schleicher highlighted the OECD's pioneering role in assessing educational outcomes globally. The push towards incorporating unstructured data sources and automating data validation processes reflects an understanding of the evolving nature of education and the need for innovative approaches to capture its complexities. The next challenge for PISA is the adoption of AI and big data techniques, such as web scraping and machine-supported coding systems. This

innovation marks a pivotal step in revolutionizing educational assessment, making it more adaptive and reflective of real-time learning processes.

World Bank: Marie Helene Cloutier, Senior Economist, World Bank

Marie Helene Cloutier placed emphasis on a common structural framework and used the example of utilizing big data analytics in Punjab, Pakistan, illustrating the potential of integrating diverse data sources to enhance education management and policymaking. Pakistan's approach to data inter-operability and the creation of data stories are part of a broader strategy to make education data more accessible and actionable for stakeholders at all levels. This aligns with the World Bank's overarching goal of reducing poverty and promoting shared prosperity by improving education outcomes through evidence-based policies.

UNSD: Luis Gonzalez Morales, Chief Data Innovation Section, United Nations Statistics Division (UNSD)

([Presentation](#))

Luis González Morales highlighted the division's commitment to embracing technological advancements and non-traditional data sources, such as satellite imagery, mobile phone metadata and online information. This innovative approach, epitomized by the UN Big Data initiative, marks a significant departure from solely relying on traditional statistical methods, aiming to enrich the monitoring and implementation of the SDGs. By incorporating a broader range of data sources, UNSD seeks to provide more timely, detailed, and relevant insights, which are essential for informed, dynamic policymaking and a more comprehensive understanding of progress across all SDGs, including those related to education.

Smart Africa: Thelma Quaye, Director, Smart Africa

Thelma Quaye underlined the collaboration with ITU and the World Bank as an example of a pan-African effort to harness digital technology for sustainable development. The focus on precise data sets, data regulation, and capacity building are all part of a comprehensive strategy aimed at overcoming the digital divide within the continent. The emphasis on cloud infrastructure reflects a critical need for scalable, secure, and accessible data storage and processing

capabilities, which are essential for the vast amounts of data generated by modern digital technologies. This approach is in line with the African Union's Digital Transformation Strategy for Africa (2020-2030), which seeks to leverage digital technologies to drive socio-economic development across the continent.

OEI: Andrés Delich, Deputy Secretary General, Organization of Ibero-American States (OEI)

([Presentation](#))

Andrés Delich addressed the specific challenges faced by the region in producing data in the education sector. These challenges include disparities in access to technology, varying levels of digital literacy and the need for infrastructure development. The Generation Connect initiative and the focus on digital transformation maturity are indicative of efforts to not only enhance technological capabilities but also to ensure that these technologies are effectively integrated into educational systems and practices. The Digital Transformation Maturity Index could serve as a benchmarking tool for countries to assess their progress and identify areas for improvement.

Moderator´s insights

The interventions from the sessions moderated by Mr. Chakroun illustrate a collective recognition of the transformative potential of technology in education data production. The move towards more agile, inclusive, and technologically advanced data systems is not just about adopting new tools but also about fostering a culture of innovation, collaboration, and ethical responsibility among all stakeholders.

Session 13b: Technology panel/Member States

The session on the Role of Technology in Education by Member States, moderated by Mr. Sobhi Tawil, Director, Futures of Learning and Innovation at UNESCO, showcased a variety of strategies, challenges and innovative solutions employed by various countries to integrate technology into their education systems. Each country presented its unique approach, reflecting its socio-economic context, educational needs, and technological infrastructure.

Colombia: H.E. Minister Aurora Vergara, Minister of National Education, Colombia

([Presentation](#))

Colombia's Minister, Aurora Vergara, underscored the government's commitment to enhancing educational technology through a significantly increased budget. This investment aims to align with the nation's educational policies and targets, emphasizing the importance of technology in achieving these goals. A critical challenge highlighted by Minister Vergara is addressing the declining perception and proficiency in technology use and understanding as students advance in their education. This trend points to a gap in the effective integration of technology across different educational levels, signalling a pressing need for intervention. To tackle these challenges, Colombia is taking a comprehensive approach by integrating artificial intelligence (AI) into the educational curriculum. This initiative seeks to foster partnerships between the education sector, universities, and industry, thereby enhancing the learning experience and preparing students for future technological demands. Additionally, the government is working towards establishing a regulatory framework that ensures a safe and supportive environment for technology users, highlighting a proactive stance on digital literacy and safety in education.

Saudi Arabia: H.E. Engr. Alghamdi Saad Abdulghani, Deputy Minister for Planning and Development, Ministry of Education, Saudi Arabia

Saudi Arabia emphasized the integral role of data in education planning, announcing the launch of the National Data Link. This platform integrates more than 200 educational indicators and supports the "My School" initiative, which aims to provide a robust platform for managing crises and enhancing teaching and learning processes. The country has made significant investments in developing 35 cloud centres and integrating 149 government entities and 200 data centres. This infrastructure supports service delivery and the responsive use of data for the improvement of education, including the maintenance and modification of remote learning platforms established during the pandemic.

Syrian Arab Republic: H.E Dr. Rami Walid Aldden Al Dulli, Deputy Minister

Syria's Deputy Minister outlined the ministry's plan for digital statistics encompassing every school, student, and teacher. The country is working on a post-COVID-19 education transformation, focusing on an education platform which will provide virtual examinations and virtual schooling to reach even the most remote areas. Syria faces unique challenges, such as sanctions and connectivity issues, but is committed to moving towards e-examinations and digital statistics, including training 450,000 teachers to use technology effectively.

Connecticut Commission for Educational Technology (DAS): Doug Casey, Executive Director for the Connecticut Commission for Educational Technology (DAS)

([Presentation](#))

Doug Casey highlighted the diversity of standards (national, state, and local) and the predominance of state and local funding in education technology. He emphasized the need for standardization, transparency, privacy, and digital literacy. The country is leveraging unstructured data through AI, addressing the digital divide, and engaging parents more in the educational process.

The Gambia: Alpha Bah, Head of EMIS and ICT units, Ministry of Basic and Secondary Education, The Gambia

([Presentation](#))

Alpha Bah presented the use of SMS/WhatsApp and AI to collect and access school data. This innovative approach is contributing to overcoming data collection challenges, especially regarding out-of-school children (OOSC). COVID-19 has exposed gaps and provided an opportunity to rebuild the Education Management Information System (EMIS) based on this experience, showing that enabling conditions beyond technology are crucial for effective data use.

Indonesia: Dr. Anindito Aditomo, Head of Agency of Standard, Curriculum, and Assessment of Education, Ministry of Education, Indonesia

([Presentation](#))

Dr. Anindito Aditomo, highlighted Indonesia's education reform aimed to improve the quality of student learning by leveraging technology. The reform, initiated in 2019, includes a national assessment which is collecting data from 4.3 million students. The results are given back to teachers and local governments for action. This approach demonstrates the critical role of technology in data collection, analysis, and provision of incentives for behavioural change among teachers.

Brazil: Betina Fresneda, Analyst, Brazilian Institute of Geography and Statistics

([Presentation](#))

Betina Fresneda showcased Brazil's SDG platform, which allows users to access a wide range of SDG 4-related information, including methodological sheets, data tabulators and an interactive GIS map. This initiative will provide free, quality data to users and illustrates the challenges of integrating data from various sources, including administrative data.

Spain: Jesús Ibáñez, Deputy Director of Statistics and Studies, Ministry of Education, Culture and Sport, Spain

([Presentation](#))

Jesús Ibáñez presented the country´s integrated management system to collect data from various departments, including education, social security databases and national statistical offices. The country has developed an institutional environment with clear roles and responsibilities and protocols for data protection and cooperation between different statistical producers. Spain's approach underscores the importance of balancing administrative data and household survey data to provide a comprehensive view of the education sector.

Moderator´s insights

This session moderated by Mr. Sobhi Tawil revealed the diverse ways technology is being harnessed to improve education systems worldwide. Common themes include the need for robust data infrastructure, the integration of AI and big data into education processes, the challenges of connectivity and digital literacy and the importance of privacy and data protection. Each country's presentation emphasized the critical role of technology in enhancing educational outcomes, addressing the digital divide, and preparing students for a rapidly changing world.

TAKEAWAYS
- Diverse ways technology is being harnessed to improve education systems

Challenges:
- Need for robust data infrastructure
- Integration of AI and big data into education processes
- Need for connectivity and digital literacy
- Importance of privacy and data protection

Session 14: Education data: challenges and solutions forward

([Official document](#))

Ms. Stefania Giannini addressed the urgent need to meld data collection with policy application within the education sector. She presented a vision where data was not merely supplementary to educational policy but a cornerstone that informed and directed decision-making processes. She raised the concept of a "missing dashboard", a metaphorical tool that policymakers had long been missing. This envisioned tool would amalgamate diverse streams of education data –from household surveys to administrative records, learning assessments and financial data – into a coherent, easily navigable format. Such a tool, as imagined by Ms. Giannini, would not only demystify the complex web of education data but also empower policymakers with the insights necessary for informed decision-making.

The growing data sources in education revealed both the opportunities and challenges that lie in leveraging this vast repository of information:

- the emergence of generative AI and large language models has increased the capacity to process and analyse extensive datasets beyond human capabilities,
- opening new avenues for educational research and policy formulation

Obstacles:

- accessibility
- technical expertise
- potential to perpetuate bias and discrimination.

In confronting these challenges, Ms. Giannini introduced the Education Databot, a UIS initiative aimed at harnessing the power of machine learning, natural language processing and data visualization. This tool is comparable to the functionalities of ChatGPT but focuses on numerical data to improve the manner in which policymakers, researchers and educators access and interpret complex education datasets. By providing rich data and metadata in multimodal formats, the Databot is intended to enhance decision-making, support new research methodologies, and facilitate learning in previously unimaginable ways.

Ms. Giannini's discourse not only encapsulated the potential of technological innovations to redefine the educational landscape but also highlighted UNESCO's commitment to guiding the conversation towards principles of access, equity, and inclusion. Through the creation of tools like the Education Databot, Ms. Giannini's vision reached beyond the immediate future, heralding an era where data-driven insights become integral to the development of equitable and effective education systems worldwide.

Introducing the Education Databot: SDG 4 analysis with AI technology

The Education Databot, introduced by UIS Director Silvia Montoya, represents a significant leap in the field of data visualization within the education sector. This AI-powered tool, developed as a prototype, aims to revolutionize how education data related to SDG 4 is accessed and interpreted by policy-, makers, researchers, and stakeholders. By utilizing advanced machine learning techniques, the Education Databot simplifies complex education datasets, making them more accessible and interpretable for non-technical users, thereby facilitating informed decision-making and policy formulation.

The Databot is designed with a user-friendly interface that guides users through a structured process of defining analysis objectives, selecting datasets, and customizing data visualizations. This process includes choosing from various visualization libraries, selecting goals suggested by the Databot based on the chosen dataset, and generating tailored visualizations using generated code. These features not only enhance the tool's flexibility and utility but also ensure that users can easily tailor the visualizations to meet specific analytical needs, thereby making data-driven insights more actionable. As the Databot evolves, it promises to be a valuable resource in transforming the analysis of education data, making it more useful for a broad audience.

Session 15: Provisional agenda and place of the second EDS Conference

([Presentation](#) / [Official document](#))

Building upon the foundational discussions set forth in the "Provisional agenda and place of the second Conference on Education Data and Statistics" (document 1 UIS/EDS/15), and following the introduction by the Secretariat, the UNESCO EDS Conference has officially endorsed the draft provisional agenda for its forthcoming second session, thus paving the way for the EDS Commission to refine and finalize the agenda.

The Conference is scheduled to take place from 21 to 23 April 2027, in Paris, France.

TAKEAWAYS:
Next EDS Conference will take place from 21 to 23 April 2027, in Paris, France

Session 16: Report of the Conference

([Presentation](#) / [Official document](#))

The presentation delivered by Luis Crouch provided a comprehensive understanding of the event's outcomes, showcasing the collective accomplishments and insights of participants. He emphasizes the importance of collaborative efforts in advancing education data and statistics, which are crucial for policy-making and educational improvement.

Dr. Crouch highlighted the work of the collective efforts of UNESCO, UIS staff, partners, Member States, and speakers, resulting in the approval of more than nine resolutions. These covered a broad spectrum of educational concerns, from early childhood education (ECE) and technical and vocational education and training (TVET) to higher education, education in emergencies and data-driven decision-making. Each resolution prompted dialogue, with an average of 15 to 20 comments from different countries. Notably, the Conference endorsed the convening of its

second session on 21–23 April 2027 in Paris, France, thus affirming the importance of a continuous community of practice that underpins a governance framework essential for advancing on SDG 4.

Dr. Crouch also emphasized the identification of critical themes and interdisciplinary issues during the Conference. Among them were the importance of data collection, despite its associated costs, emphasizing its invaluable contribution to both policy formulation and classroom learning assessments. He is juxtaposing the expenses of education against the cost of ignorance, urging a re-evaluation of the traditional assumption that increased funding automatically leads to enhanced educational outcomes. He challenged this premise through examples from Nordic countries, prompting a reconsideration of resource allocation and utilization within educational frameworks.

Dr. Crouch also spotlighted the urgent need for technical assistance in harnessing data for policy enhancement, planning and pedagogical advancements. Kenya and Nigeria were particularly noted for their significant contributions in this domain. He posed a critical inquiry regarding the preparedness of international agencies to meet this challenge, addressing the imperative for global standardization in data management and the integration of disparate data sources as essential measures for boosting the effectiveness of education data.

Dr. Crouch also considered the integration of statistics as a means to "bridge worlds" emphasizing the strategic use of household surveys, censuses and the linking of administrative datasets. He cited The Gambia as an exemplary case, where key datasets were interconnected to compile a dataset for value-added, showcasing the potential for rapid and insightful educational analysis.

There is also room for methodological humility in the face of the complexities and uncertainties inherent in data collection and analysis. Such humility is essential to navigate the challenges of education statistics and making informed decisions. The interplay between politicians, civil society and technocracy further illustrates the dynamic and impactful nature of education data in shaping policies and societal perceptions, as demonstrated by the "PISA shock" example in Germany in 2000.

Overall, Dr. Crouch's presentation not only provides a thorough synthesis of the Conference's achievements and discussions but also lays the groundwork for future progress in the field of education data and statistics. It emphasizes collaboration, the critical issues at hand and the forward-looking approaches that characterize the efforts of UNESCO, its partners, and Member States in advancing educational goals globally.

Closing statements: Ms. Silvia Montoya, Director, UNESCO Institute of Statistics

Silvia Montoya, Director of the UIS, concluded the EDS Conference by emphasizing the successful establishment of an international community dedicated to education data and statistics. She thanked participants and delegates for their constructive engagement and their shared commitment to building this community. Below is a summary of the main points of her closing statements:

Building a global education data community:

- The Conference established a vibrant international community dedicated to improving education data and statistics. This initiative aligns with efforts to monitor and enhance education outcomes worldwide, focusing on national SDG 4 benchmarks.
- The active participation and engagement of delegates from over 125 countries demonstrates a global commitment to quality education for all by 2030.

Addressing challenges and setting benchmarks:

- While 70% of countries have engaged with the SDG 4 monitoring framework by submitting at least one benchmark, challenges remain, including missing benchmarks, the quality of defined targets and effective monitoring.
- The Conference set forth an agenda to tackle these issues through enhanced communication, realistic benchmark setting and alignment with national education goals.

Strategic approaches and future directions:

- Proposals to link education data with broader social development goals, the introduction of innovative tools like the SDG 4 Scorecard, and the focus on new benchmark indicators on

digital transformation and sustainability highlight strategic approaches for advancing education quality.

- These efforts emphasize the importance of integrating SDG 4 efforts into national development strategies to increase their impact.

Continuous improvement and engagement:

- The ongoing refinement of the benchmarking process, including the addition of new indicators and the invitation for countries to update or submit new benchmarks, signifies a commitment to continuous improvement.
- The focus on contemporary challenges such as digital connectivity in schools underscores the evolving nature of education quality and the need for adaptability in monitoring and advancing the progress of education.

Finally, Dr. Montoya took a moment to extend her deepest appreciation to the key supporters who played a pivotal role in the success of the UIS and the Conference. She expressed her gratitude towards the governments of the United Kingdom, Canada, Quebec and the City of Montreal, France, Sweden, and Norway for their unwavering support. Additionally, she acknowledged the significant contributions of the Gates Foundation, the Pacific Community (SPC), and the Global Partnership for Education (GPE), emphasizing their invaluable support in advancing the goals of the UIS and the broader education data and statistics community.

Dr. Montoya's acknowledgment emphasized the collaborative effort and the collective commitment of these entities in supporting the vital work of improving global education through data and statistics.

Closing statements: Ms. Stefania Giannini, Assistant Director-General for Education at UNESCO

As the first session of the EDS Conference drew to a close, Ms. Giannini offered her concluding remarks, expressing satisfaction that this first-of-its-kind conference would now become a staple in the global education agenda. Below is a summary of the main points of her closing statements:

Creating a practice community:

- This inaugural Conference aimed to establish a regular event in the global education agenda, successfully bringing together experts in education data and statistics from over 125 countries.
- The event saw the launch of the 2024 SDG 4 Scorecard and introduced new tools for tracking progress, including the first Education Databot prototype.
- The Conference fostered a flourishing community of practice, encouraging new collaborations and idea exchanges, embodying the principles of collaboration and transparency crucial for building a data culture.

Investing in education data for the future:

- Highlighting the significance of data and the need for investment, the Conference emphasized that education data and statistics are undervalued components of our education systems.
- There is a call for better resources to support the education data agenda, emphasizing that investing in education data is investing in the future. This message will be advanced in discussions surrounding the Pact of the Future and the Global Digital Compact leading up to the UN Summit of the Future.

An intersectoral approach:

- The Conference championed an intersectoral approach, aiming to link education data with other social development outcomes to illustrate their interconnectedness. This approach is crucial for the upcoming World Social Summit, focusing on the connections between education, health, and labour.
- New benchmark indicators on greening education, digital transformation and youth participation exemplify how education can connect with other sectors, encouraging participation in the SDG 4 benchmark-setting exercise to align with global standards for education progress.

In her closing remarks, Ms. Giannini marked the event as the beginning of an ongoing conversation on advancing SDG 4 monitoring. She expressed gratitude to all participants for their engagement and critical contributions, with special thanks were extended to her colleagues at the UNESCO Institute of Statistics, the Global Education Monitoring Report team, and the entire Education Sector for their roles in orchestrating the event. She also commended the interpreters for their adept handling of technical terms, facilitating communication in multiple languages and, symbolically, in the language of statistics. Ms. Giannini's closing words emphasized a collective commitment to ensuring that every teacher and learner is counted, laying the groundwork for sustained global collaboration and progress in education.

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