Statistical Commission
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Items for discussion and decision: education statistics


Note by the Secretary-General

In accordance with Economic and Social Council decision 2018/227 and past practices, the Secretary-General has the honour to transmit the report of the Institute for Statistics of the United Nations Educational, Scientific and Cultural Organization on education statistics. The Institute is the official source of cross-nationally comparable data on education; it is mandated to work with partners to develop new indicators, statistical approaches and monitoring tools to assess progress made in achieving Sustainable Development Goal 4. The present report provides information on recent developments in international education statistics, in particular in the light of the 2030 Agenda for Sustainable Development, regarding standards, methodologies, data collection and funding gaps, including financial aid. The 2030 Agenda requires high-quality, timely and disaggregated statistics to respond to new data needs and emerging challenges. The report includes information on the Institute’s initiative to improve coordination and to implement global efforts to strengthen the capacity of national educational statistical systems. This involves expanding its current mandate to include brokerage, with the goal of improving the coordination of the investments of donors and countries. The Statistical Commission is invited to express its views and to provide guidance on the pillars and lines of action proposed by the Institute in its new brokerage role to support more integrated, better-quality, cost-effective and timely statistical data for education at the national level.


I. Introduction

1. The present report addresses five items: (a) standards and methodologies; (b) data production; (c) new standards for learning outcome indicators; (d) leadership and coordination on Sustainable Development Goal 4: global and thematic indicators for Sustainable Development Goal; and (e) the proposal of the Institute for Statistics of the United Nations Educational, Scientific and Cultural Organization (UNESCO) to better support capacity development for Sustainable Development Goal 4 data. The Statistical Commission is invited to take note of the progress made in education statistics standards, methods and data collection and to express its views and provide guidance on the pillars and lines of action proposed by the Institute to support more integrated, better-quality, cost-effective and timely statistical data for education at the national level.

II. Standards and methodologies in education


2. Following the adoption of the 2011 revision of the International Standard Classification of Education (ISCED) and the 2013 revision of the International Standard Classification of Education Fields of Education and Training (ISCED-F), the Institute and its partners in the collection of education-related data, Eurostat and the Organization for Economic Cooperation and Development (OECD), adapted their education survey instruments to the new standards. The 2011 revision of levels of education and educational attainment was implemented in the 2014 round of surveys on education and educational attainment. The new classification for fields of education and training was introduced in the 2016 round of education surveys.

3. The Institute, Eurostat and OECD worked jointly on an operational manual for ISCED 2011, which was published in early 2015 in English, French and Spanish. Later in 2015, a document containing detailed field descriptions and correspondence tables between ISCED-F and previous classifications of fields of education was published online. Owing to the technical nature of the field descriptions, the document is currently available in English only.

4. In addition to providing technical documents supporting the implementation of the revised standard classifications, the Institute and its education data collection partners have worked with countries to produce comparisons, or “mappings”, of national education programmes and qualifications with regard to ISCED 2011 in order to assist data users in interpreting the new education indicators. By the end of 2018, 170 mappings will be available on the Institute’s website.

5. The vast majority of countries have made good progress in implementing ISCED 2011 in their international reporting of education and education attainment data, with many reporting ISCED 2011-compliant data for the fifth time and ISCED-F-compliant data for the third time in 2018.
B. Development of new statistical methodologies and standards

6. In order to improve the quality and use of financial statistics on education, the UNESCO Institute for Statistics, the UNESCO International Institute for Educational Planning and the UNESCO Office in Dakar and Regional Bureau for Education in Africa (Pôle de Dakar) have pooled their expertise to address the issue of educational expenditure statistics on the basis of the use of national accounts techniques, building on the theoretical framework of satellite accounts. The result of that collaborative work was the development and publication, in mid-2016, of a methodological guide on national education accounts, developed using the principles of existing international standards, such as the 2008 System of National Accounts and ISCED 2011, and building on previous experience in that area. A national education accounts exercise is a comprehensive education finance data collection, processing and analysis exercise that covers all education levels, from pre-school, primary and tertiary, including vocational training. It includes all sources of funding, at all levels of government and both private and external sources, and all types of education providers, whether public or private. It serves as a logical and systematic framework for the analysis of education financing flows.

III. Data production

A. Global education surveys

7. In 2018, the education data collection of the Institute for Statistics included the following seven core education questionnaires, administered globally and collecting data on the following themes:

   (a) Students and teachers for ISCED levels 0 to 4;
   (b) Educational expenditure for ISCED levels 0 to 8;
   (c) Students and teachers for ISCED levels 5 to 8;
   (d) National education systems;
   (e) Involvement in the development, processing and dissemination of the UNESCO-OECD-Eurostat survey of formal education;
   (f) Literacy;
   (g) Educational attainment.

8. Compared with the Institute’s previous report to the Statistical Commission, in 2016 (E/CN.3/2016/28), the main changes in the content and format of the Institute’s education survey were the following:

   (a) The content of the core questionnaires described above was revised to extend the scope of the survey to align with the need to monitor the achievement of the Sustainable Development Goals. As part of a redesign process, new variables were added, while others – those with very low response rates or low relevance – were removed in order to streamline the survey design and reduce the burden on respondents;

   (b) The global and regional teacher’s modules and the school resources in the Africa module were discontinued in 2017, and the parts of their content relevant to Sustainable Development Goal 4 monitoring were integrated into the core questionnaires of the Survey of Formal Education;
In order to improve the timeliness of the data disseminated by the Institute, the annual launch of the Survey of Formal Education was advanced by several months, starting from the 2018 round, to allow for the collection and dissemination of data for the reference year (now year t+1 instead of year t+2, as previously). Moreover, the annual timetable for data dissemination has been adjusted accordingly to provide one main education data release in September of each year and a release of updated data a few months later.

The Institute will continue to lead the review and collaborate with relevant international organizations, including its education data collection partners, OECD and Eurostat. The priorities for the Institute in the coming years will be the improvement of the quality of data collected through its surveys to produce better-quality data for Sustainable Development Goal 4 indicators and to support countries, especially those with limited statistical capacity, in improving their ability to collect and report data. Priorities also include the establishment of data compilation and reporting mechanisms to promote innovation using new technologies and data at the national level and improve data reporting at the international level, while reducing the reporting burden on countries. To inform that approach, the Institute has already conducted a thorough profile analysis of country non-response and is reviewing strategies to support national statistical capacity-building.

B. Education data from household surveys

The Institute is guiding the work of two groups dedicated to the use of education indicators calculated on the basis of household survey data: the Inter-Agency Group on Education Inequality Indicators, and a task force for education spending estimates based on household survey data of the Intersecretariat Working Group on Household Surveys.

A focus on equity is a key feature of the Sustainable Development Goals, which are driven by the objective to leave no one behind. In order to address challenges in measuring equity, the Inter-Agency Group on Education Inequality Indicators was established in 2016 to promote inter-agency coordination. Led by the Institute, the United Nations Children’s Fund (UNICEF) and the World Bank, the Group also includes other organizations involved in the production and use of household survey data (for example, the reports of the Global Entrepreneurship Monitor, the Global Partnership for Education, the International Community Foundation (ICF), OECD, RTI International and the United States Agency for International Development) and aims to promote the use of household survey data for the purposes of monitoring education at the global, regional and national levels, ensuring standardized analysis and reporting in order to complement evidence available through administrative data.

Among its activities, the Inter-Agency Group on Education Inequality Indicators is drafting guidelines for the calculation of global and thematic Sustainable Development Goal 4 indicators from household survey data. The initial focus of the Group was on seven indicators: 4.1.4, completion rate; 4.1.5, out-of-school rate; 4.1.6, percentage of children overage for grade; 4.2.2, participation rate in organized learning one year before the official primary entry age; 4.2.4, gross early childhood education enrolment ratio; 4.3.2, gross enrolment ratio for tertiary education; and 4.5.1, parity indices. At its latest meeting, in December 2017, the Group reviewed quality standards for the reporting of indicators calculated from household surveys.

To improve the quality and use of financial statistics on education, the Institute and the World Bank collaborated on a publication entitled *Measuring Household Expenditure on Education: A Guidebook for designing household survey questionnaires*. This work was carried out by the task force for education spending...
estimates based on household survey data of the Intersecretariat Working Group on Household Surveys. The Guidebook contains methodological guidelines and recommendations for collecting data on household expenditure on education through sample surveys.

14. With the publication of the Guidebook, the Institute and the World Bank aim to: improve data availability for the calculation of Sustainable Development Goal indicator 4.5.4 (education expenditure per student by level of education and source of funding); ensure proper representation of education expenditures in consumption-based poverty and inequality measures; and enable more microeconometric research on resource allocation in households. The work is closely aligned with the national education accounts methodology, developed in 2016 by the Institute for Statistics the International Institute for Educational Planning and the Office in Dakar and Regional Bureau for Education in Africa (Pôle de Dakar), as described in paragraph 6 above.

IV. New standards for learning outcomes indicators

15. In 2018, the Institute made considerable progress in the area of learning outcomes. This encompasses efforts aimed at developing new methodologies to report learning outcomes, tools to assess national learning assessment systems and documents supporting the implementation of learning assessments, as well as advocating for a common learning metric. The Institute also moved ahead with respect to data collection on learning outcomes.

16. The Global Alliance to Monitor Learning is making steady progress in defining the learning outcomes indicators of the Sustainable Development Goal 4 monitoring framework. The first step for all of these indicators is the development of detailed frameworks that can serve as a reference to teach, develop and assess children, young people and adults. These frameworks play a key role in guiding countries to produce Sustainable Development Goal 4 data.

17. As part of efforts to develop indicator 4.1.1, the Institute, in partnership with the International Bureau of Education, has developed global frameworks of reference for reading and mathematics. Both frameworks were the focus of in-depth consultations among national and international assessment experts. Moreover, the Institute is currently in the process of publishing an online interactive data capture tool that will allow national respondents to enter data using a series of questions in order to create a dialogue between the respondents and the Institute.

18. As part of efforts aimed at developing indicator 4.4.2, the Institute has developed a global framework of reference on digital literacy skills. The first step involved a technical review of more than 40 digital literacy frameworks used by countries throughout all regions and at all income levels, as well as those of regional and international assessment initiatives. In addition, the project team prepared an analysis of the digital literacy skills used in major economic sectors, with a specific focus on developing countries. The draft framework was subject to an expert consultation, followed by a wider online consultation, after which the final version was published by the Institute and approved by the Technical Cooperation Group on the Indicators for Sustainable Development Goal 4 – Education 2030.¹

19. In terms of reporting and to ensure that a minimum set of contents and procedures are followed, the Institute has produced a content alignment tool and a

¹ The Technical Cooperation Group on the Indicators for Sustainable Development Goal 4 – Education 2030 serves as a platform for the discussion and development of the indicators used for monitoring the Education 2030 targets in an open, inclusive and transparent manner: more details are available at: http://tcg.uis.unesco.org.
procedural alignment tool that will be used to review the alignment of national learning assessment frameworks with the global content framework and to ensure that national learning assessment procedures are sufficiently rigorous and have acceptable standards. Countries can use the tools to evaluate their procedures in the implementation of national learning assessments. The tools are accompanied by an online platform that enables mapping and contains instructions on interpreting results.

20. To better support and guide countries, the Institute is producing a series of “quick guides” as part of its capacity-development efforts: *Quick Guide No. 2: Making the Case for a Learning Assessment* helps countries to navigate learning assessment reforms; and *Quick Guide No. 3: Implementing a National Learning Assessment* provides step-by-step instructions on conducting a learning assessment at the country level and offers guidance on what, who and how to measure. *Guide No. 3* is an easy-to-use reference that describes the various stages of the process, from data collection and analysis to the dissemination of results. The Institute has also mapped the costs and needs of funding from countries regarding learning assessments.

21. The Catalogue of Learning Assessments is an Institute initiative to compile standardized information on various aspects of learning, or skills, assessments in countries throughout the world. The Institute implemented the first version of the Catalogue in 2014 and 2015. The information collected will not only support the monitoring of Sustainable Development Goal 4, but will also help countries to evaluate and improve the quality and robustness of their assessment or examination systems. Version 2.0 of the Catalogue 2.0 consists of seven modules, which contain questionnaires on the following areas:

   (a) General information on learning assessments;
   (b) General information on early childhood development assessments;
   (c) Results from household-based assessments on digital literacy skills;
   (d) Results from household-based assessments on functional literacy and numeracy skills;
   (e) Results from household-based assessments on information and communications technology skills;
   (f) Results from school-based assessments;
   (g) Results on early childhood development.

22. The Institute has published a database on national learning assessments and citizen-led assessment data for indicator 4.1.1. Additional efforts are under way to expand and strengthen the current database in the near future.

23. The Institute website hosts a learning outcomes dashboard that maps existing learning assessments in relation to Sustainable Development Goal 4 indicators. The dashboard is a visualization containing the inventory of learning assessment survey questions from existing instruments to help to guide countries and stakeholders through examples of how to frame questions and what indicators the questions are informing. The exercise will help country-level and international users to gain a vital new set of tools that can support them in tracking and achieving an inclusive and equitable high-quality education and in promoting lifelong learning opportunities for everyone while facilitating the harmonization process.

24. The Institute has finalized a publication entitled “Sustainable Development Goal 4 Data Digest 2018: Data to Nurture Learning”, which addresses the complex issue of learning outcomes and presents a compilation of the most comprehensive and up-to-date work by international experts and relevant institutions to inform the learning indicators of Sustainable Development Goal 4. The digest also presents
learning evidence concerning early child development, mathematics and reading skills for school-aged children and digital and work-related skills for young people and adults.

25. In addition, for the purpose of monitoring Sustainable Development Goal 4, the Institute has developed a mini-Literacy Assessment and Monitoring Programme, a publicly accessible tool for the production of data relevant to reporting indicator 4.6.1, proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex. The programme provides a list of documents organized by process, which guides countries, step by step, towards the implementation of literacy assessments. It can be implemented as a stand-alone module within a household survey or as a dedicated survey.

V. Leadership and coordination in Sustainable Development Goal 4: global and thematic indicators for Sustainable Development Goal 4


27. As noted in paragraph 16 above, the Global Alliance to Monitor Learning is making progress in defining the learning outcomes indicators of the monitoring framework for the implementation of Sustainable Development Goal 4, including the development of frameworks that can serve as a guide to teach, develop and assess children, young people and adults.

28. To lead the development and implementation of thematic indicators for education, in May 2016, the Institute and the UNESCO Division for Education 2030 Support and Coordination convened the Technical Cooperation Group on the Indicators for Sustainable Development Goal 4 – Education 2030. The Technical Group provides a platform for the discussion and development, in an inclusive and transparent manner, of the indicators used to monitor targets. It provides recommendations to the Institute on the actions needed to improve data availability and on the development of methodologies to produce thematic indicators for the follow-up and review of Sustainable Development Goal 4. The Group includes experts from 38 Member States, international partners (OECD, UNESCO, UNICEF and the World Bank) and civil society organizations (Education International and the Collective Consultation of Non-Governmental Organizations on Education 2030) and the Co-Chair of the Sustainable Development Goal Education 2030 Steering Committee.

29. Sustainable Development Goal 4 – Education 2030 Framework for Action consists of 43 thematic indicators, including the 11 global monitoring indicators determined by the Inter-Agency and Expert Group on Sustainable Development Goal Indicators of the Statistical Commission. Each global indicator is focused on the outcomes of a specific target for Sustainable Development Goal 4, whereas the broader set of thematic indicators is designed to cover the wider agenda and other factors that should be addressed in order to achieve each target.

30. The Technical Cooperation Group met in January 2018 and agreed on a set of 33 indicators, 11 global and 22 thematic, for reporting in 2018. The remaining 10 thematic indicators, which were identified as requiring further development, were addressed by the working group on indicator development of the Group in 2018, and this work will continue in 2019. In addition, 6 of the indicators for reporting in 2018,
most of them global, will require further development. The Group also decided that UNESCO should make a formal request to the Inter-Agency and Expert Group on Sustainable Development Goal Indicators to change the tier classification for indicator 4.7.1 from III to II. More details on the meetings of the Group are available at its website (http://tcg.uis.unesco.org).

31. To improve the availability and accessibility of data on education, the Institute is improving its website (http://tcg.uis.unesco.org) and adding new dissemination platforms for Sustainable Development Goal 4 indicators. New data visualizations highlight the most recent national data, trends over time and disparities between various population groups. Country profiles developed by the Institute serve as a resource for national policy planners, donors and other stakeholders.

32. With its September 2018 data release, the Institute began to disseminate data for the following three indicators for which a methodology was approved at the meeting of the Technical Cooperation Group in January 2018: (a) 4.7.2 (percentage of schools that provide life skills-based HIV and sexuality education); (b) 4.a.2 (percentage of students experiencing bullying); and (c) 4.a.3 (number of attacks on students, personnel and institutions). The Institute is also expanding its database of disaggregated education indicators calculated from household survey data. Recent additions include indicator 4.3.2, the gross enrolment ratio for tertiary education, disaggregated by sex, location and wealth quintile.

33. The Institute has prepared several publications and other products, designed to provide Member States and other stakeholders with methodological guidance on the collection, analysis and use of education data, in particular in relation to Sustainable Development Goal 4 indicators. They include the following:

(a) Quick Guide to Education Indicators for Sustainable Development Goal 4;
(b) Sustainable Development Goal 4 Data Book: Global Education Indicators 2018;
(c) Sustainable Development Goal 4 Data Explorer;
(d) Sustainable Development Goal 4 Country Profiles;
(e) Quick Guide No. 2: Making the Case for a Learning Assessment;
(f) Quick Guide No.3: Implementing a National Learning Assessment;
(g) High-level Political Forum 2018: Contribution from the Sustainable Development Goal-Education 2030 Steering Committee;
(h) Quick Guide: Use of household surveys for Sustainable Development Goal 4 monitoring;
(i) Quick Guide: Implementation of a household Survey for Sustainable Development Goal 4 monitoring;
(j) E-handbook on Sustainable Development Goal indicators (Statistics Division of the Department of Economic and Social Affairs of the Secretariat);
(k) Sustainable Development Goal 4 Data Digest 2018: Data to Nurture Learning.

34. The Institute has published a Global Strategy for Education Data with an innovative demand side approach and an investment case for Sustainable Development Goal 4. In the concept note, the case is made for greater investment in the data needed to chart progress towards Sustainable Development Goal 4. In addition, a blog and a white paper were published in the run-up to a financing conference of the Global Partnership for Education, held in Dakar in February 2018.
The object of the meeting was to secure pledges from donors in order to ensure the future education of no fewer than 870 million children.

35. In order to monitor Sustainable Development Goal 4 adequately and effectively, it will be necessary to spend $280 million per year. That figure is based on estimates of the costs of strengthening and maintaining education management information systems in all countries, including other data sources in addition to those based on administrative records, and ensuring global coverage in surveys. The other data sources include multipurpose school and household surveys and learning assessments and community-level data, which, if efficiently organized, could enable reporting on multiple indicators. Also factored in is the use of technology for improved data collection, analysis and use, not only for policy dialogue and decision-making, but also to inform action and monitor progress.

36. Currently, it is estimated that the amount spent on Sustainable Development Goal 4 monitoring is $148 million per year and that the majority of that amount is used to support monitoring in upper-middle- and high-income countries. To meet the shortfall of $132 million per year, it will be necessary to increase the amount of national and external resources allocated to this activity. It is estimated that external financing, or aid, to low- and lower-middle-income countries for the purpose of monitoring the Goal will need to increase by up to $60 million per year over current levels, through 2030. In addition, all countries will have to increase their national expenditures on monitoring Sustainable Development Goal 4 by one third.

37. Learning assessments and household, or multipurpose, surveys are relatively new sources of data that will be the focus of a significant part of the additional funding for monitoring. In the light of the rapid growth of international, regional and national assessments in the past two decades, countries have several options from which to choose in order to monitor and develop capacity regarding the learning outcome-related indicators of Sustainable Development Goal 4. Nevertheless, for many low- and middle-income countries, inadequate financing remains a significant obstacle to participating in cross-national assessments or conducting national ones. If additional national and external resources are not mobilized quickly for this purpose, opportunities for advancing the monitoring of learning and driving improvements in quality will be lost.

38. For many low- and middle-income countries, capacity development, including the support necessary for global and regional coordination and monitoring, is required in order to strengthen education management information systems and expand the coverage of data and improve its quality.

VI. Institute for Statistics proposal to update capacity development for Sustainable Development Goal 4 data

39. Ensuring and maximizing the effectiveness of financing for capacity development is essential for the successful implementation of the Sustainable Development Goal 4 agenda. Support for statistical capacity-building has been supply-driven and piecemeal, with little emphasis placed on the demand for data from partner countries, and has, in many cases, been more focused on the needs of external stakeholders. While resources are a problem, the approach has been somewhat flawed. In many cases, external consultants have been carrying out the work of the statistical agencies – an approach described by OECD as fixing a broken piece in the data machine – which does not help the system to develop its capacity to repair itself in the future. The Partnership in Statistics for Development in the Twenty-first Century includes a study of the setbacks and failures of that older approach to capacity development. The approach changed in 2016, when the Cape Town Global Action
Plan for Sustainable Development Data of the Statistical Commission was proposed. The plan, which was finalized in 2017, defined the role of development cooperation providers by a demand-driven approach, supporting better coordination.

40. The Institute has proven to be a strong vehicle for addressing technical solutions and providing strong political platforms for collaboration and driving consensus. Nevertheless, there is a need to improve coordination and support for countries. As described above, the Institute proposes to upgrade its mandate, adding a brokerage function. This function consists of information-sharing, networking and coordinating support, with the objective of guiding donors’ and countries’ investments and better coordinating recipients and donors in order to produce more integrated, better-quality, more cost-effective and timely statistical data for education.

A. Pillars of the new approach

41. A demand-driven approach: one of the main issues that characterizes the education data ecosystem is that mandated agencies aggregate and disseminate massive amounts of data with no clear connection with the needs of users – basically, countries – and other stakeholders, donors, among others. The agencies represent one of the suppliers of the ecosystem. The countries are producers and, to some extent, suppliers of data, but they also provide the demand that needs the data, along with development partners and other stakeholders, for policy-related and other decisions. To summarize the complexity of the situation, countries are not only suppliers of data to themselves and the global community, but they also demanders of funding. Donors and development agencies, on the other hand, are demanders of data and suppliers of funding and technical assistance.

42. An understanding of the education data eco-system by mapping needs and opportunities: more, and better, information is needed on the following two issues:

   (a) What are the most essential data items that data-supplying countries are willing to produce on their own because the items reflect information considered crucial for the proper functioning of their education systems and require technical capacities that the countries do not have and, hence, require donor support?

   (b) What are the key incentives and restrictions that donor countries and agencies face when deciding the kind of data that they are willing to fund and that make it difficult for them to act in a coordinated way in providing funding for data that countries produce?

43. Integration of data sources into the national statistical system: the data collection systems used in education include various data sources: administrative data, sociodemographic and population data, household surveys, learning assessments and special surveys that are, in general, fragmented and not used productively. What is needed is an integrated approach that countries can use, and that includes various sources of information, to facilitate the maximum utilization of national data by the countries that produce it.

44. It is essential to develop an integrated management system that maximizes the use of existing education data in order to reduce the data burden and weed out data that have little impact on education policy, as well as to take advantage of the various sources of information.
B. Main lines of action

45. The function of the Institute is not primarily to provide funding, but to share information and act as a broker among users, innovators, suppliers and funders. To bring order to the ecosystem for educational data, it will be necessary to follow a long-term plan with the following six components:

(a) A quick assessment of data demand among recipient countries, country by country, rather than an average sense of needs to support countries in their efforts and provide information about practices;

(b) A mapping of institutional barriers and incentives among donor agencies and donor countries to assess the incentives and constraints in their support of data production and dissemination at the following three levels: (i) recipient countries; (ii) international organizations in charge of multi-country initiatives; and (iii) bilateral arrangements;

(c) Increased value based on improved dissemination, aimed at guidelines for investment, with alternatives regarding cost, funding and options;

(d) A clearinghouse for technical guidelines;

(e) Regional and national engagement strategies: mapping of national Sustainable Development Goal 4 focal points, definition of an engagement strategy at the national level and coordination with regional organizations to ensure alignment and harmonization at the national, regional and global levels;

VII. Action required by the Statistical Commission

46. The Statistical Commission is invited to take note of the progress made in the standards, methods and data collection of education statistics and to express its views and provide guidance on the pillars and lines of action proposed by the Institute to support more integrated, better-quality, cost-effective and timely statistical data for education at the national level, as described in the present report.