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USING SURVEYS TO MONITOR SDG 4: WHAT ARE THE CHALLENGES GOING FORWARD?

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1. Introduction

Historically, education indicators have been produced by education institutions or ministries based on records (administrative data), tailored to each country's needs. However, the increasing availability of household and other surveys over the past 30 years means that they have become a complementary (and, in a few cases, as in the case of equity, exclusive) source of data on education indicators that needs to be accommodated by national education statistics systems. Related issues are addressed in the other note on the use of multiple sources.

A. Advantages and uses of household and other survey data in education statistics

Household and other surveys bring a number of advantages into education statistics, even though their primary aim is not education related.

- *Disaggregation*: Surveys collect information on individual and household characteristics impacting educational effectiveness, such as socioeconomic background (e.g. sex, ethnicity, disability, and income or wealth) or family composition.
- *Consistency*: Indicators, such as the population of out-of-school children, have historically combined administrative enrolment counts (numerator) and population data (denominator). Household surveys provide both the numerator and denominator for calculating such indicators, using the same population framework for both components.
- *Representativeness*: Surveys with a nationally representative sample frame (and with geographic and socioeconomic strata) can collect information on selected indicators that administrative data cannot do; e.g., self-reported skills and non-formal training of youth/adults not participating in the educational system.

The advantages of household and other surveys become more evident when they are part of a regular program, ensuring the continuous and comparable production of statistics over time. Currently, several regular household and other surveys are available (**Table 1**).

Table 1: Regular household and other surveys relevant for education

Source	Typical frequency	Typical education questions	Typical training questions
Population census	Every 10 years	School attendance Educational attainment Literacy status	Participation in technical and vocational training programs Certifications or qualifications obtained
National household surveys	Annual or less frequent	As population census, plus: Education spending ICT skills	As population census
Multi-purpose cross-national household survey programs	Every 5 years (e.g. DHS, MICS)	Child development School attendance Learning (MICS) ICT skills (MICS) Adult literacy	
Labour force surveys	Annual or more frequent	As population census, plus: Skills and competencies	As Population census but more detailed questions

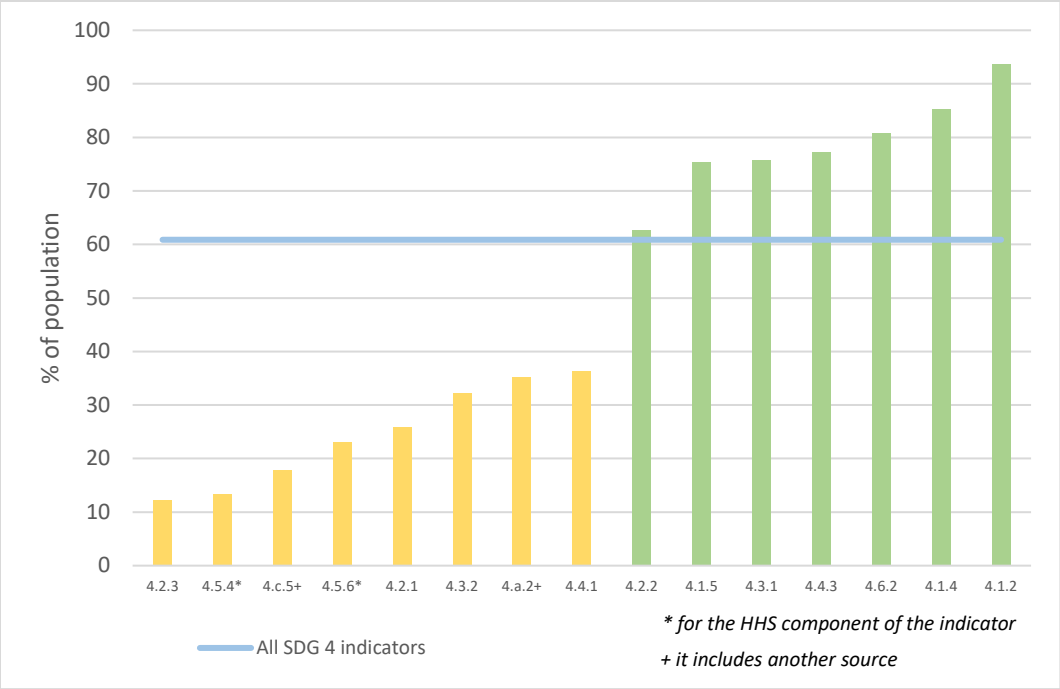
School surveys	Every 5 to 10 years	School health and nutrition	

Several SDG 4 indicators can be reported drawing on household and other survey sources, (**Table 2**). In fact, survey data cover a large share of the global population for several of these indicators (**Figure 1**).

Table 2: SDG 4 indicators that may be derived using household survey data

Indicator name	Type
4.1.0 Proportion of children/young people prepared for the future, by sex	Thematic
4.1.2 Completion rate (primary education, lower secondary education, upper secondary education)	Global
4.1.4 Out-of-school rate (1 year before primary, primary education, lower secondary education, upper secondary education)	Thematic
4.1.5 Percentage of children over-age for grade (primary education, lower secondary education)	Thematic
4.2.1 Proportion of children aged 24-59 months who are developmentally on track in health, learning and psychosocial well-being, by sex.	Global
4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex	Global
4.2.3 Percentage of children under 5 years experiencing positive and stimulating home learning environments	Thematic
4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	Global
4.3.2 Gross enrolment ratio for tertiary education, by sex	Thematic
4.3.3 Participation rate in technical and vocational programmes (15- to 24-year-olds), by sex	Thematic
4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	Global
4.4.3 Youth/adult educational attainment rates by age group and level of education	Thematic
4.5.4 Expenditure on education per student by level of education and source of funding	Thematic
4.5.6 Expenditure on education by source of funding (public, private, international) as a percentage of GDP	Thematic
4.6.2 Youth/adult literacy rate	Thematic
4.a.2 Percentage of students experiencing bullying in the last 12 months in a) primary and b) lower secondary education	Thematic
4.c.5 Average teacher salary relative to other professions requiring a comparable level of qualification	Thematic

Figure 1. Coverage of SDG 4 indicators produced from surveys as percentage of global population



The UIS publishes indicators estimated from survey data provided by a number of entities (**Table 3**).

Table 3: SDG 4 indicators that may be derived using household survey data, by provider

Data source/provider	Indicators
UIS Literacy and Educational Attainment Survey: Administers bi-annually two questionnaires and countries submit responses, drawing on household surveys.	4.4.3 4.6.2
UIS Education Standards and Methodology Section: Processes micro-data from household surveys, mainly DHS and MICS.	4.1.2, 4.1.4, 4.1.5, 4.2.2, 4.3.2, 4.4.3, 4.5.4, 4.5.6, 4.6.2
Economic Commission for Latin America and the Caribbean Processes micro-data from household surveys for Latin American countries.[1]	4.1.2, 4.1.4, 4.1.5, 4.2.2, 4.3.2, 4.4.3, 4.6.2
Global Education Monitoring (GEM) Report: Processes micro-data from household surveys.	4.1.2, 4.1.4, 4.1.5, 4.2.2, 4.6.2
International Labour Organisation (ILO): Provides labour force survey microdata that are processed by UIS.[2]	4.3.1, 4.c.5 (denominator)
UNICEF: Collects and processes multi-purpose microdata on early childhood development and learning environments.	4.2.1, 4.2.3
International Telecommunication Union (ITU): Processes national household survey microdata on ICT skills.	4.4.1
World Health Organisation (WHO): Collects and processes multi-purpose microdata from two surveys (Health Behavior in School-Aged Children survey and Global School-based Student Health Survey) on school health.	4.a.2

[1] More details in ECLAC background paper (2023).
[2] More discussion in LFS background paper (2023).

2. Challenges and potential solutions

A research and development agenda aimed at enhancing the use of surveys within educational information systems could contribute to a more holistic understanding of educational processes and outcomes, enabling better-informed policies and decisions in countries. But implementing such an agenda at a national level presents significant challenges. This summary explores these constraints and discusses issues related to survey instruments, educational attainment, reference periods, individual background information, literacy and skills, household

A. Non-harmonized survey instruments

The effectiveness of a survey depends on the questions it asks. Questions should be consistent across surveys and follow similar formats when possible. However, variations in response categories can limit disaggregation of education indicators by level. Additionally, some education programs, such as pre-primary and technical education, may not be captured in surveys, affecting the calculation of certain SDG indicators.

Potential solutions:

Introduce dialogue between the national statistical office, the education ministry and any technical partner at the drafting stage of the survey questionnaire to ensure that:
- education categories in survey items cover all major national education programs, including non-formal ones, allowing respondents to report current attendance in or attainment of these programs.
- are aligned with the International Standard Classification of Education (ISCED) to facilitate comparative analysis;
- survey items inquire about both the highest grade attained or currently attended, as well as whether they have completed the highest grade attended.

-Cross National surveys ensure that survey items related to education attendance are linked to specific school years to facilitate both processing and interpretation.

B. Differing reference periods

Variations in reference periods for educational data collection can affect comparability between surveys. The specific case if reference period in LFS and this should be worked in collaboration with ILO.

Potential solutions:

- Align reference periods for data collection with SDG 4 indicators, such as school-year-based reporting for formal education participation.

C. Quality and comparability of background information

Sufficient data on household and individual background information are essential for disaggregating education indicators and ensuring accurate calculations. Issues like age misreporting and differences in defining socioeconomic factors like household wealth, migration, and disability can affect comparability across surveys.

Potential solutions:

- Gathering data on the respondent's month of birth, along with the interview date, to calculate the age at the beginning of the school year.
- Collecting contextual information using international existing guidelines (e.g. Washington Group on disability questions).

- work in close collaboration with the ISWGHHS.

D. Literacy, knowledge, and skills

Monitoring learning outcomes and skills poses measurement and comparability challenges. Survey-based measurements of literacy vary in terms of self-reported and direct measures, and the choice of questions and populations assessed can affect comparability.

Potential solutions:

- Provide guidance on the examples of questions that could be used for comparability.

E. Household education expenditure

Monitoring household expenditure on education is essential for monitoring SDG indicators 4.5.4 and 4.5.6. However, collecting accurate expenditure data via surveys is challenging due to respondents' recall accuracy and willingness to share financial information. Surveys differ in the types of expenses they capture and their recall periods.

Potential solutions:

- Develop guidelines for a standard set of questions on education expenditure for household income and expenditure surveys.

F. Availability and accessibility of survey data

Access to survey and census data, including microdata and metadata, is vital for effective use. Many countries do not make their data accessible, limiting cross-country analysis. International repositories like IHSN provide a platform for data dissemination, but metadata often lack information needed to assess survey methodology and coverage.

Potential solutions:

- Grant the custodian agency (UIS) data files available for public use upon registration and agreement to basic conditions while ensuring data security and privacy.
- Publish complete metadata publicly, even if micro data accessibility is restricted, within international survey repositories.
- Utilize tools and standards such as the International Household Survey Network's NADA software and the Data Documentation Initiative (DDI) international codebook standard to facilitate data cataloguing, repository establishment, and metadata alignment.
- HHS data repository: establish and develop the inventory with the collaboration of member states, ensuring accessibility while maintaining data security and privacy.

In conclusion, household surveys offer valuable insights into education indicators, but their effective implementation and utilization face numerous challenges. Addressing these challenges is essential to ensure reliable and meaningful data for monitoring progress towards SDG 4.

3. Agenda forward

Household and other surveys and censuses play a crucial role in monitoring SDG 4. While progress has been made in increasing the availability and relevance of surveys for SDG 4 monitoring, there are still challenges related to data quality, comparability, and coverage. To maximize the potential of household surveys in informing SDG 4 monitoring, the agenda forward should include the "potential solutions" listed in the previous section, by which, governments and international partners can unlock the full potential of household surveys in monitoring SDG 4, ensuring the availability of high-quality, comparable, and relevant data for informed decision-making and sustainable development.

Implementing the potential solutions outlined for addressing challenges related to household surveys in education indicators requires a comprehensive strategy that involves collaboration, capacity building, and standardization. Here's a summary of the strategies to implement those solutions effectively:

- Raise awareness of the opportunities that surveys offer for generating education statistics:
    - Raise awareness among policymakers, researchers, and the public about the importance of high-quality survey-based data on education for evidence-based decision-making.
    - Advocate for continued financial and technical support for household surveys in education.

- Establish a standardized set of modular survey instruments covering all major national education programs. Those modules should allow to be administered individually or along an existing survey and should, for instance:
    - Ensure that the education programs are aligned with the International Standard Classification of Education (ISCED).
    - Ensure that survey questions related to education attendance are linked to specific school years, aligning with the reference periods for SDG 4 indicators.
    - Include additional data fields, such as the respondent's month of birth and interview date, to calculate precise age at the beginning of the school year.
    - Integrate simple enumerator-assessed literacy tests alongside self-assessed measures.
    - Ensure that data on education expenditures, including tuition fees and all relevant expenses, follow global guidelines for better comparability. Link education expenditures to individual students within households for more precise data.

- Develop guidelines for data collection and processing to ensure consistency and comparability of education indicators.
    - Expand literacy assessments to all youth and adults, not just those below a certain level of educational attainment.
    - Develop standardized definitions and measures for socioeconomic factors like household wealth, migration, and disability to enhance comparability across surveys.

- HHS data repository: establish and develop the inventory with the collaboration of member states, ensuring accessibility while maintaining data security and privacy.