

EDSC/11/4.1

## HOUSEHOLD SURVEYS AND EDUCATION



CHAPTER IN 'UNITED NATIONS  
HANDBOOK ON HOUSEHOLD SURVEYS'


Silvia Montoya and Manos Antoninis



## Introduction

Household surveys are a data source for education statistics that complements or substitutes data from administrative records. For some indicators (e.g., adult literacy, adult participation in training), survey data are the only source. Even if they are not explicitly designed for education purposes, household and other surveys have a number of advantages, which can be useful to understand education:

- **Policy application:** Surveys collect information on individual and household background characteristics that permit disaggregation of education indicators by sex, location, income or wealth, ethnicity, language and disability (as well as the intersection of these characteristics). Such information helps identify possible causes of observed social and economic outcomes, which can be used in policy design, and also provides insights into policy implementation. In contrast, disaggregation is challenging with administrative data.
- **Consistency:** Often two different data sources need to be combined to calculate key education indicators. At times, administrative data are inconsistent. For example, enrolment ratios have relied on the combination of enrolment counts from ministries of education and population data from national statistical offices. The two sources may not agree with each other, e.g. the population of students aged 10 may exceed the population of 10-year-olds. Surveys address this problem by providing internally consistent information on both components of population-based indicators.
- **Comprehensiveness:** Surveys collect information on some education indicators for which administrative data are not well suited. For example, surveys can assess early childhood care and education or non-formal education and training (because it is simpler to ask service users than dispersed service providers); selected skills among adult population, such as ICT or literacy (which can only be assessed on a sample basis); and household education spending (as the household is the source of information).
- **Lifelong perspective:** Most discussions on household surveys and education tend to focus on attendance and attainment indicators. But the Sustainable Development Goal 4 framework gives a lifelong learning framework. Household surveys, if appropriately designed, can provide information on different:
  - types of indicators:
    - education participation and attainment, e.g. out-of-school rate, completion rate
    - education environments, e.g. language used in school, bullying
    - education outcomes, e.g. literacy, self-reported digital skills
  - levels of education; and
  - modalities of education: formal, non-formal and informal



The usefulness of household and other surveys is greater when they are part of a regular programme, which helps ensure the production of comparable statistics over time. Survey types relevant for education include income and expenditure surveys, labour force surveys, and multipurpose surveys (including international programmes such as the Demographic and Health Survey, DHS, and the Multiple Indicators Cluster Survey, MICS). Past overviews of selected issues related to the use of household surveys in education statistics include Glewwe ([2000](#)), UIS et al. ([2004](#)), EPDC ([2009](#)) and UIS ([2020](#)).

Although researchers and international organizations have used household surveys extensively to analyze education issues, officials in ministries of education in many low- and middle-income countries have been less inclined to use them. Having historically relied on administrative records, many find it difficult to interpret survey findings especially when they appear to be inconsistent with administrative data ([UIS and GEM Report, 2022](#)). Equity in education, including the status of out-of-school populations, has also received insufficient policy emphasis. Partly as a result of that, there is relatively little involvement of education ministries in the design of national household surveys administered by national statistical agencies. Hence education questions sometimes do not capture the national education structure well, undermining analysis and cross-country comparisons.

This chapter highlights key considerations for basic and advanced questionnaire issues and analytical tasks when planning surveys to measure education indicators. It also places future methodological developments within the education data institutional structure and concludes with key takeaways.

## Basic questionnaire design issues

In order to measure education indicators accurately and maximize comparability between surveys, it is important to add specific questions in a fixed sequence to the household roster section. The roster is the natural place for these basic questions to ensure that the education status of all household members is recorded. A household roster should include at a minimum two sets of questions:

### *Attainment* for all household members

A1. Has (name) ever attended education?

If yes:

A2. What was the highest education level (name) attended?

A3. Within that education level, what was the highest grade/year (name) completed?

### *Attendance* for some household members

B1. Is (name) attending education during the 20XX school year?

If yes:

B2. What education level is (name) attending?

B3. What grade/year is (name) attending?

It is recommended that all surveys follow this structure and language. Yet even these seemingly straightforward questions need to address seven key challenges, described next.



## 1. Attainment/attendance: level of education

**Issues:** Questionnaires tend to list the following education level options: pre-primary, primary, secondary and post-secondary education. Care needs to be exercised, as the definition of these levels may have changed over time, which is why it is important to also record the grade/years completed. Another problem is that some questionnaires include other descriptors (e.g. religious, non-formal) which do not correspond to a recognized level but to a different education modality.

**Solution:** Consult with ministries of education to ensure commonly understood national terms for education levels are used to minimize misreporting. It is recommended to create a new variable at the analysis stage that aligns nationally defined levels of education to the International Standard Classification of Education (ISCED) to facilitate international comparisons. Avoid conflating (formal) levels with (non-formal) modalities as, in some countries, those who attend non-formal education may do so in addition to attending formal education (e.g. religious). If non-formal education is a common pathway in a country, develop additional questions to capture this phenomenon.

## 2. Attendance: reference year

**Issue:** Some questionnaires ask whether an individual is 'currently' attending education. There is a risk of inaccuracy if a survey takes place during an academic holiday period and a risk of misclassification if a survey takes place over two academic years.

**Solution:** Specify the academic year to which the attendance question refers to prevent misleading responses. Record this information in the survey's background documentation.

## 3. Attendance: reference age group


**Issue:** Education attendance questions tend to be asked of individuals aged 5-24. However, censoring the target age group both to the left and to the right is limiting information. First, many children under 5 attend some form of education, often as part of an early childhood development or pre-primary education programme. Second, many education systems are trying to open more pathways into post-secondary education or duration of bachelor are above 5 years.

**Solution:** Expand the age range of roster education questions to the group 3 to 29 years.

## 4. Attainment: additional question on graduation

**Issue:** Household survey questionnaires typically do not capture information on whether individuals completed an education level with the relevant certificate or degree. This is particularly important with respect to secondary education certificates, professional qualifications and university degrees.

**Solution:** It is recommended that survey questionnaires ask respondents to specify whether they have acquired a certificate, qualification or degree at the end of the education cycle, following consultation with ministries of education.



A4. Did (name) receive a graduation certificate/qualification/degree from that education level?

## 5. Attendance: additional question on school type

*Issue:* Growing levels of participation in private education institutions is an important public policy issue. Data on the preschool, school or university type attended can be used to analyse and explain trends. The challenge is to use a terminology that clearly distinguishes between institutions that do and do not charge fees, and between institutions that are and are not subsidized by the government.

*Solution:* It is recommended that survey questionnaires ask respondents to specify the type of education institution attended, following consultation with ministries of education, using a classification that is (i) easily understood by respondents and (ii) policy relevant.

B4. What type of education institution is (name) attending?

## 6. Attendance: additional questions on early childhood care and education

*Issue:* Early childhood care and education is a diverse sector whose complexity is not easy to capture consistently across dimensions of duration, location and funding due to a multiplicity of factors. There is usually a distinction between services delivered to children up to and above age 3.

*Solution:* It is recommended that survey questionnaires try to capture the diversity of services at this level with questions that relate to duration and location for children aged 3 and above, for whom it is reported that they participated in early childhood development or pre-primary education.

B5. Does {name} receive early childhood development services in a centre?

If yes:

B6. How many hours per week does {name} normally spend at the centre?

## 7. Attendance: additional questions on post-secondary education

*Issue:* Household survey questionnaires do not tend to provide sufficient information on the post-secondary education course attended.

*Solution:* In addition to the question recommended above on graduation, it is recommended that survey questionnaires try to capture the duration and modality of post-secondary education, for those for whom it is reported that they participated in post-secondary education.



B7. How many years does it take for the post-secondary course {name} is attending to be completed?

B8. Does (name) attend this course from a distance?

B9. Does (name) attend this course full time?

## Advanced questionnaire design issues

In addition to attendance and attainment, harmonization of questionnaires is advisable in a range of other issues. This annex focuses on three topics that deserve attention: technical and vocational education and training; skills; and education expenditure.

### 1. Attendance: additional questions on technical and vocational education and training

*Issue:* Technical and vocational education and training is the most diverse sector whose complexity in terms of duration, location, funding and purpose is very difficult to capture, for example in global SDG indicator **4.3.1**.

*Solution:* It is recommended that (labour force) survey questionnaires try to capture the diversity of training with questions that relate to purpose, duration and modality for adults aged 25 to 64.

C11. In the last 12 months, did {name} participate in education and training for professional reasons?

If yes:

C12. How many hours did {name} spend in education and training in the past 12 months?

C13. Did (name) attend receive this education and training in an education institution?

C14. Did (name) attend receive this education and training at the workplace?

C21. In the last 12 months, did {name} participate in education and training for personal reasons?

If yes:

C22. How many hours did {name} spend in education and training?



## 2. Skills

Collecting information on education outcomes through surveys is complex and costly. It is not possible to do justice to the relevant issues but three of them are addressed briefly below.

### **a. Adult literacy rate**

*Issue:* Information on adult literacy has historically relied on self-reported answers to questions such as ‘can you read’, which have not proven to be reliable or comparable (e.g. [Nath, 2007](#)). Direct assessment is needed to ensure high-quality measurement of SDG global indicator **4.6.1**.

*Solution:* All household surveys, at least in low- and middle-income countries, should administer a direct reading test to the adult population, even to those who have attended secondary education, such as the one used by DHS which relies on cards with short, 4- to 6-word sentences.

### **b. Foundational literacy and numeracy**

*Issue:* Although a school-based learning assessment and the leadership of the education ministry should be the first choice for measuring SDG global indicator **4.1.1a** (literacy and numeracy skills by the end of grade 2 or 3), a household-based assessment is possible for low- and lower-middle-income countries as long as it meets [reporting criteria](#).

*Solution:* Household survey designers can use the [Assessment for Minimum Learning Proficiency](#) household module, which assesses foundational literacy and numeracy skills.


### **c. ICT skills**

*Issue:* Global SDG indicator **4.4.1** on information and communication technology (ICT) skills consists of self-reporting on nine ICT-related activities in the three months preceding the survey. It is an indicator in need of constant evolution given the rapid technological changes.

*Solution:* Household survey designers should consult with the Expert Group on ICT Household Indicators, which coordinates efforts on the development of this indicator ([ITU, 2024](#)) within the conceptual framework of the Digital Competence Framework for Citizens (Digcomp) ([European Commission, 2024](#)).

## 3. Education expenditure

*Issue:* Education expenditure questions are a standard feature of household income and expenditure (or budget) surveys. However, there remain important differences between national surveys in the extent of detail and in the way these questions are administered: expenditure categories (e.g. fees), separating expenditure paid to institutions from other expenditure, questions per individual or for the entire household, recall periods, distinction by type of education institution attended etc.



*Solution:* A standard set of questions on education expenditure has been proposed as reference for survey practitioners ([Oseni et al., 2018](#)). The most important recommendation is that surveys should collect expenditure information for each household member and each item to improve accuracy.

## Data integration

Education statistics needs to use multiple data sources or types of data sources in the estimation of headline indicators. Other sectors have previously faced such challenges. For example, the need to use multiple surveys with different methodologies (as well as to address data gaps) to estimate wasting and stunting rates led to the establishment of the Joint Child Malnutrition Estimates inter-agency group ([UNICEF et al., 2023](#)). The need to use administrative and survey data sources to estimate health indicators led to the establishment of the UN Inter-agency Group for Child Mortality Estimation ([Alkema and New, 2014](#)) and the UN Maternal Mortality Estimation Interagency Group ([Alkema et al., 2016](#)), which developed estimation models.

Two Bayesian hierarchical models, inspired by the approach used to estimate health indicators, have been adapted to the education context:

- The model for the completion rate, which is SDG global indicator **4.1.2**, uses multiple household surveys ([Dharamshi et al., 2022](#)), which if examined in isolation could – due to differences in methodologies, sampling, objectives or circumstances at the point of data collection – produce results that are not fully comparable.
- The model for the out-of-school rate ([UIS and GEM Report, 2022](#)) combines household survey and administrative data, making efficient use of both sources.


As more indicators are estimated drawing on household survey data, new challenges emerge that need to be addressed ([UIS, 2024a](#)):

- Ensure best practice in reporting estimates based on multiple data sources
- Ensure country participation and ownership in the generation of such estimates
- Ensure consistency between various estimates (e.g. out-of-school and completion rates)

## Institutional architecture for education data and statistics

The [Conference on Education Data and Statistics](#) is the apex body with the mandate to communicate, discuss, and reach consensus on key issues regarding concepts, definitions, methodologies, and operational aspects of education indicator measurement in the form of recommendations and guidelines for adoption as international standards to improve comparability. It takes place every three years. Each country is invited to send three members to the Conference, one of which is a national statistical office representative. The implementation of the Conference decisions is the responsibility of the Education Data and





Statistics Commission, which consists of 28 member states. The Commission has five working groups, one of which focuses on household surveys. The scope of its work is to address all issues raised in this annex ([UIS, 2024b](#)).

## Key takeaways

Countries need to:

- Develop capacity to use education questions in household surveys for policy planning.
- Design education questions in household surveys to take into account:
  - a lifelong perspective to education, therefore improving the way questions are asked on early childhood, post-secondary and adult education; and
  - the more flexible approaches through which education is accessed, therefore capturing distant and non-formal modalities.
- Ensure questionnaires are simple, keeping filter questions to a minimum, and aligned with good international practice.



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Email:

[uis.tcg@unesco.org](mailto:uis.tcg@unesco.org)

[edstatcom.uis@unesco.org](mailto:edstatcom.uis@unesco.org)

[uis.director@unesco.org](mailto:uis.director@unesco.org)

[uis.unesco.org](http://uis.unesco.org)

[@UNESCOstat](https://twitter.com/UNESCOstat)