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## Monitoring tools

### BRIEF 3

#### Educational measurement

**Learning is affected by a wide variety of factors, many of which cannot be directly examined using learning assessments. Additionally, excessive emphasis on learning assessments can cause some unintended negative effects, including a narrowing of the curriculum and teaching practices to “teach to the test”, decreases in student mental health, and increases in inequality due to the growth of private out-of-school tuition services.**

For these reasons, a comprehensive plan for monitoring learning and education quality should include other tools beyond just learning assessments. Some of the most relevant tools include: the inclusion of learning-relevant indicators in school censuses and education management information systems (EMIS); inspections and accreditation systems; school report cards; using geographic information systems (GIS) to map quality-relevant data; and carrying out public expenditure tracking surveys.

**School Census:** Most countries around the world use an annual school census as the primary way of collecting information from schools around the country. The school census usually takes the form of a questionnaire to be completed by school managers. It includes questions on factors such as school infrastructure, furniture and equipment, teaching and learning materials, school income and expenditure, teacher characteristics, and student characteristics. This data is usually aggregated at a regional and national level into an Education Management Information System (EMIS), and is used as the basis for educational decision-making. School census data can also be used as a basis for providing feedback to school managers and teachers.

**Education Management Information Systems (EMIS):** Since the mid-1980s, many countries have developed Education Management Information Systems (EMIS) as a central tool for monitoring their education systems. A country-level EMIS is usually a computerized database in which the relevant information can be collected, processed, and used in support to policy-making, planning, monitoring and management of education. To support countries that may not have the resources to design a quality custom-made EMIS platform, UNESCO has created open source software available free of charge (see [www.openemis.org](http://www.openemis.org)).

**Inspections/Accreditation:** All around the world schools are inspected, with the rationale that inspection contributes to the quality of schools and education systems. Although different traditions use different terms—such as school accreditation, inspection, or supervision—these processes generally have two interwoven objectives: public accountability and school development. The particular balance of these objectives and their impact on learning and teaching in schools are dependent on the political context and education system of individual countries.

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Public Expenditure Tracking Surveys (PETS) and Quantitative Service Delivery Surveys (QSDS): Public Expenditure Tracking Survey (PETS) is a methodology for tracking funds from the central down to the school level. They allow for measuring the leakage or diversion of funds in the entire education system using sampling methods, thus giving insight into whether resources are being used in the ways intended for general operational needs and for efforts to improve education quality. PETS can be used to check whether key flows of resources that have a direct impact on learning actually reach their intended beneficiaries—such as: school funds, textbooks, learning materials, equipment, etc. Experience shows that the wide dissemination of PETS results can help reduce leakage in the system. PETS is often combined with a Quantitative Service Delivery Survey (QSDS), which focuses on other dimensions such as ghost teachers or teacher absenteeism, and which are also key when trying to improve the quality of learning.

School Report Cards: School report cards aggregate the available information on schools (e.g. on enrolment, teacher and student attendance, as well as on student academic performance) in a public form accessible to concerned stakeholders. There is a wide diversity of models for school report cards, from well institutionalized models where information is provided for each school and published regularly on the internet; to one-shot report card surveys that are conducted with the support of civil society organisations. According to recent research, school report cards can help increase test scores. School report cards can also contribute to better school monitoring through public participation, provided that information is “relevant, accurate, easy to understand and simple to access by all stakeholders” (Hallak and Poisson, 2007).

Mapping: Geographic Information System (GIS) technology can be used to map data onto geographical areas, in order to expose regional patterns and relationships that may otherwise be less obvious when represented only in numeric tables and databases. The visual mapping of complex data can help educators at all levels to make informed decisions about such factors as resource distribution, teacher deployment, and planning for education in conflict or emergencies. For an example of the use of GIS data in education, see the U.S. National Center for Education Statistics [online mapping tool](#), which allows users to visually map socio-economic and education data onto school districts across the country.

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