



## SABER

## Education Management Information Systems

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*Information is a key ingredient in an effective education system. Effective education policymaking in a country requires information about the inputs, resources, governance, operations, and outcomes of its education system. An education management information system (EMIS) provides systematic, quality data in a structured environment that enables utilization of the information produced in planning and policy dialogue. SABER-Education Management Information Systems aims to help countries improve data collection, data and system management, and data use in decision-making, thereby improving different elements of the education system and contributing to the end goal of improving learning for all children and youth.*

### Why do countries invest in education management information systems?

An EMIS provides knowledge to education stakeholders about the status of the education system as a whole and the learning outcomes within a country. By using an EMIS, governments are able to analyze and utilize data to improve their education systems. When implemented effectively, an EMIS can also potentially support both management and planning by principals and administrators, as well as teaching and learning in the classroom. An EMIS helps generate several valued-added components to improve educational quality, including quality data, efficient expenditures, institutionalized data systems, enhanced

management practices, data-driven policies, smart investments, and targeted instruction.

### What challenges exist?

Information and data are essential components of a strong education system. Yet many countries struggle with related issues, from lack of quality and timely data to weak policies and data system architecture. These barriers block data from being effectively used to monitor and improve education outcomes and have troubling implications for international education goals. There is a critical need for a tool that can either assess a country's existing EMIS or determine whether the country needs to establish a new system for the following reasons:

- Data gaps prevent countries from conducting data-driven decision-making in education policy. Crucial data is often not available and available data is often hard to use. An EMIS at the country level should be the primary mechanism for systematically monitoring progress toward and fostering accountability for reaching these goals. In some countries, information systems do not exist at all or the indicators related to educational goals are not being tracked systematically.
- These issues are global, limiting the ability of governments and the international community to monitor progress toward the achievement of learning for all.

## What is SABER-Education Management Information Systems?

Using new diagnostic tools and detailed policy information, the World Bank Group's Systems Approach for Better Education Results (SABER) platform collects and analyzes comparative data and knowledge on education systems around the world and highlights the policies and institutions that matter most to promote learning for all children and youth. SABER's detailed data-gathering and analysis are organized by "domains," or areas of education policymaking within an education system. These currently include levels of education (early childhood development, primary and secondary, workforce development, and tertiary), types of quality resources and supports (school finance, school health and school feeding, and teachers), areas of governance (engaging the private sector and school autonomy and accountability), information sources (education management information systems and student assessment), and complementary inputs and cross-cutting themes (equity and inclusion, information and communication technologies, and resilience). SABER aims to give all parties with a stake in educational results—from students, administrators, teachers, and parents to

policymakers and business people—an accessible, detailed, objective snapshot of how well the policies of their country's education system are oriented toward ensuring that all children and youth learn.

The SABER-EMIS tool assesses the effectiveness of a country's data system and data utilization practices, with the aim of informing policy dialogue and helping countries better manage education inputs and processes to achieve overall efficiency and better learning outcomes. It is intended for use by government education policymakers to assess policy areas of relevance to a country's EMIS and then benchmark them against international best practices. The tool's evidence-based framework is useful to education system stakeholders to evaluate the implementation of policies that govern data quality, monitoring, and utilization in decision-making.

## What drives effective education management information systems?

The EMIS tool examines policy intent and the degree to which intended policies are effectively implemented on the ground. Intent refers to the way in which an EMIS and its overarching purpose are articulated by decision-makers and documented in policies and legislation, as well as standards and

strategy documents. Assessing intent alone reveals only part of the picture. As such, the EMIS assessment also evaluates policy execution. Implementation refers to the degree to which policy intentions take place during the day-to-day activities of stakeholders at all levels of the education system.

Based on extensive research and global evidence, SABER-EMIS evaluates education systems across four cross-cutting policy areas:

### **Enabling environment.**

The enabling environment consists of the legal framework; organizational structure; and institutionalized processes, human resources, infrastructural capacity, and budget of the system. This includes both the laws and the policies surrounding an EMIS. In essence, this policy area is the context in which an EMIS exists.

**System soundness.** In a sound system the processes and structures of the EMIS support the components of an integrated system. Education data are therefore sourced from different institutions and all data feed into and comprise the EMIS. Databases within an EMIS should not be viewed as separate databases, but as part of the EMIS. Key aspects of system soundness include what data are covered in EMIS and how they come together in the overarching system.

**Quality data.** The processes for collecting, saving, producing, and utilizing information should ensure accuracy; security; and high-quality, timely, and reliable information for use in decision-making. Data quality is a multidimensional concept that encompasses more than just the underlying accuracy of the statistics produced. It means that data is not only accurate, but serves specific needs in a timely fashion.

**Utilization for decision-making.** An EMIS needs to be used across the whole education system to make decisions so that measures can be taken to improve educational quality. Accurate information on education sector performance enables the design of more informed policies and programs. It is imperative to understand where decision-making occurs, if the capacity to analyze and interpret education data exists, and if specific data is available to inform decisions.

## How is SABER-Education Management Information Systems helping to improve education systems?

Assessing the state of education in a country requires information about the inputs, resources, governance, operations, and outcomes of its education system through reliable, relevant, and easily

accessible information. SABER-EMIS brings education policymakers and stakeholders closer to this level of system knowledge and insight in several ways by:

- Providing a comprehensive framework based on a thorough review of global evidence that presents international best practices in EMIS as well as a methodology to evaluate an EMIS through the critical policy areas.
- Aiding countries in analyzing their education systems through diagnosis, dialogue, and reform.
- Enhancing the global knowledge base on effective EMIS policies.
- Involving key system leaders and stakeholders in identifying reform priorities.

## How are countries and partner organizations using SABER-Education Management Information Systems to improve system effectiveness?

Launched in 2015, SABER-EMIS has moved forward quickly with assessment reports already available for Papua New Guinea, Samoa, Solomon Islands, Suriname and the State of Maryland in the United States. All assessments were well-received with considerable attention given to recommendations. In Papua New Guinea, for example,

the government was eager to adopt the SABER-EMIS recommendation to create an enabling EMIS policy from which EMIS can be managed and its intended outcomes achieved.

**Solomon Islands.** Findings from the SABER-EMIS assessment in Solomon Islands are being used to shape the government's National Education Action Plan. Shortly after the publication of the country report, the government held workshops and meetings to identify how to best incorporate EMIS-related policies into the education strategy. The SABER engagement helped in identifying underlying causes and key areas for reform in relation to system issues, data quality and capacity building. The policy recommendations are now being used by the major donors in the region namely, Secretariat of the Pacific Community (SPC) to enhance the quality of data collected and improve capacity building. Moreover, the Asian Development Bank (ADB) is utilizing the proposed recommendations for EMIS into the work program of their project on *ICT for Better Education Results*.

**Suriname.** Working closely with the World Bank Group Latin America and Caribbean education team, SABER-EMIS supported the Government of Suriname in assessing and providing recommendations to

strengthen the country EMIS. An initial *Needs Assessment* provided a snapshot of the existing EMIS and outlined a variety of improvements to strengthen the overarching system. The *Needs Assessment* helped to define the World Bank Group's education strategy for the country.

## **SABER-Education Management Information Systems Partners**

The SABER-EMIS team is working with a wide range of partners, including Pacific Benchmarking for Education Results (PaBER), UNESCO Institute for Statistics (UIS),

and the United Nations Children's Fund (UNICEF). The Australian Government's Department of Foreign Affairs and Trade (DFAT) is also a strong supporter of SABER and education systems research and has done much work to support the application of SABER globally.