



## PISA for Development system-level data

- In addition to contextual data collected from students and schools, the collection of system-level data is an important part of PISA that facilitates the analysis and interpretation of test results.
- Like PISA, PISA for Development (PISA-D) collects system-level data (including information on the structure of the education system in the country, assessments and examinations, instruction time, teacher training and salaries, national accounts, expenditure on education and enrolment) from each participating country.
- A review of the availability and quality of system-level data in PISA-D countries has confirmed that these data are technically sound, but data quality, completeness and international comparability can be improved.

Like PISA, PISA-D assesses students' skills and knowledge in three cognitive domains – reading, mathematics and science – and collects data on contextual factors, such as students' well-being, socio-economic status and learning time, through questionnaires distributed to students, teachers and schools. Each country's PISA-D national centre also completes a system-level data questionnaire on the structure of the country's education system, assessments and examinations, instruction time, teacher training and salaries, national accounts, expenditure on education and enrolment. All data collected helps analysts interpret the assessment results. The system-level data also helps OECD and partner countries understand how elements of an education system interact with each other to either secure or impede better learning outcomes. The data also describe the contexts in which education systems function and the policy dynamics operating within those systems. With this information, countries can monitor progress towards improvement targets, analyse factors associated with outcomes, and build institutional capacity for managing large-scale assessments and evidence-based policy making.

The UNESCO Institute of Statistics (UIS) was commissioned jointly by the OECD and the World Bank, a PISA-D development partner, to review the status of system-level data collection and availability (quality and completeness) in six PISA-D countries. UIS identified country-specific issues to be addressed as part of project implementation, as system-level data are used in analysing and reporting PISA-D results. UIS also provided lessons learnt for working with increasing numbers of middle- and low-income countries participating in future PISA cycles.

### *Quality system-level data and metadata are generally available in all PISA-D countries.*

Six of the nine PISA-D countries (Cambodia, Ecuador, Guatemala, Paraguay, Senegal and Zambia) completed the system-level data questionnaire in 2015 during the design, planning and co-ordination phase of the project. Honduras joined the project at the end of 2015 and is completing the system-level data questionnaire in 2017; Panama is participating in PISA 2018 in addition to the out-of-school component of PISA-D, so its system-level data is collected through PISA; and Bhutan joined in 2017 to participate in the main data collection using the cognitive-assessment instruments only. Overall, system-level data collection has shown that PISA-D countries can provide the requested



data, and that quality data and metadata are available or can be produced with some additional work. It has also shown that the six countries:

- can provide information on the **structure of their education system**, the theoretical age at entry, and the duration of each education level
- have solid institutions in charge of **national assessments and examinations** at lower and upper secondary level
- have national frameworks and implementation guidelines for **instruction time** in public institutions, by grade
- regulate **pre-service teacher training, entry into the profession** and **professional development**, but in several countries, teacher training standards and policies are changing
- can produce data on **expenditure** on and **enrolment** in public educational institutions.

*Several lessons emerged for collecting education system-level data in PISA-D countries.*

Although each country faces its own challenges in collecting and reporting on education system-level data, certain issues have emerged as common to a majority of the countries:

- Countries lack accurate data on private expenditure on education.
- There can be discrepancies between policy and actual practice, as countries sometimes lack control or disciplinary mechanisms to ensure that practice adheres to national standards.
- Education system data is not available in a single hub, but has to be collected from numerous databases maintained by different ministries and agencies.

Some of these challenges might also be faced by countries now participating in PISA. The UIS review of PISA-D system-level data collection produced recommendations for future PISA cycles:

- Countries have made concerted efforts to improve national standards, such as by upgrading minimum teaching standards. As a result, assessing the teaching force according to academic qualifications requires close scrutiny of official records.
- As different institutions within each country are responsible for the various elements covered by the system-level data questionnaire, the PISA-D national centre must communicate and co-ordinate with each of these institutions.
- The OECD could consider modifying the system-level data questionnaire to avoid collecting data and metadata that are already reported and available in international databases.

**References:**

UNESCO Institute of Statistics (2016), *Making Education Count for Development: Data Collection and Availability in Six PISA for Development Countries*, PISA, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264255449-en>

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